NOVEMBER
1951

Amateur Radio

JOURNAL OF
THE WIRELESS
INSTITUTE OF
AUSTRALIA

For the Experimenter
and Radio Enthusiast

9D.

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NOVEMBER - - 1951

Vol. 19. No. 11

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Subscription rate in Australia is 9/- per annum, in advance (post paid) and A10/6 in all other countries.

Wireless Institute of Australia (Victorian Division) Rooms' Telephone is FJ 6997.

AMATEUR RADIO

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
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EDITORIAL

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You will remember the advice given in last month's Editorial regarding the responsibilities of members, wherein it was suggested that members should obtain additions to our ranks by approaching non-members and endeavouring to enrol them in the Wireless Institute of Australia. In order to assist you in bringing forward points for discussion in your approach to intending members we have pleasure in offering the following very interesting reasons why every licensed Amateur should be a member of our organisation:—

Technical Publications: The Institute publishes its official organ "Amateur Radio" as a means of disseminating technical information and club notes of particular interest to Amateurs.

QSL Card Distribution: This feature offers members a cheap, economical and efficient method of handling QSL cards.

Lectures: The provision of lecture rooms and meeting places makes it possible for lectures of special interest to Amateurs to be given.

Field Days: Our organisation caters for those Amateurs interested in portable equipment by arranging numerous field days.

Contests: Many Amateurs are interested in contests which could not be held without an organisation such as the Wireless Institute of Australia to handle the detailed work involved.

Library: Technical publications and in some cases, instruments are available on loan to members.

Divisional Broadcasts: Divisional broadcasts keep country members and others in touch with current happenings in Amateur Fraternity.

Advisory Committees: These committees provide effective liaison between officers of the P.M.G. Department and Amateurs who, without their friendly guidance would infringe the regulations.

P.M.G. Department Liaison: The voice of the Amateur is represented to the P.M.G. Department through the Federal Council and the Federal Executive, thus ensuring regulations of a generally satisfactory nature and protecting Amateurs' rights and privileges.

A.O.C.P. Classes: The Institute provides lecture rooms and lecturers to fit intending Amateurs for examinations.

I.A.R.U. Liaison: The Institute provides liaison with other Amateur bodies throughout the world through the Federal Executive and the I.A.R.U.

Slow Morse Transmissions: Special permission has been obtained from the P.M.G. Department to assist intending Amateurs by providing slow morse transmissions.

Disposals Equipment: Organisation has been provided in various States for the collective purchase and distribution of disposals equipment.

Country Branches and Zones: The interests of Amateurs outside the metropolis is catered for by organisations within the Divisions to permit such members the opportunity to present their particular views on Amateur matters.

Affiliated Clubs: The Institute fosters and approves the affiliation with other Amateur Clubs.

We have no hesitation in saying that all of the above facilities could only be provided through an organisation such as that provided by the Wireless Institute of Australia. The democratic government of the Institute is assured through the controls exercised by the Divisions through the Federal Council and the Federal Executive who govern and defend the rights of both members and non-member Amateurs.

It is up to you to use this information in securing as many new members as possible for your Division.

FEDERAL EXECUTIVE.

The Contents . . .

A Double Conversion Superhet For 50 Mc.

BY F. J. STIRK,* VK2ABC

HAVE you ever thought about building for yourself one of these "Double Conversion Superhets" that are so glibly mentioned over the air at various times? If you have, you immediately begin to worry about which frequencies to choose for the i.f. channels? What side of the i.f. channel shall the oscillator operate? How many "birdies" and how strong will they be in the band of operation? How can I eliminate them if necessary? If a xtal is unavailable for the second oscillator will an ordinary oscillator do? What will the frequency stability be like? Will 450 Kc. be satisfactory for the second channel or should I use 175 Kc.? What tubes ought I to use? And a hundred other questions which magnify the task to terrific proportions before you start.

When you commence to look for information on these receivers it's a little hard to find unless you have an extensive library and even if you can find some description of a receiver the details are perhaps just not quite what you want and you go ahead with certain doubts in your mind and this leads to a lot of time spent in experimentation and in some cases frustration.

The receiver about to be described is not classed as a "world beater," but it is a receiver with good sensitivity, signal-to-noise ratio, reasonable selectivity, a minimum of controls and reasonable adaptability, and more to the point, within the limits of home construction.

At this point someone may say, "why a receiver?" "Why not just a converter?" Well, it's a matter of opinion, deepness of pocket, operating intentions and convenience. So for those who have in mind building something for "six" to be used in the coming DX season, here it is. Tubes used were on hand and are considered satisfactory, although better tubes could be used with perhaps advantage in the r.f. section.

The 6AG5 r.f. amplifier is used as a pentode feeding a 6AG5 used as a triode mixer. The oscillator for the first mixer is a 955 which is reasonably stable and fairly plentiful, this operates on the low frequency side of the signal tuning from 47.9 Mc. to 51.9 Mc., the first intermediate frequency being 2,100 Kc., an easily attainable frequency. The i.f. amplifier used is a 6BA6, ideal for the purpose, and with a large amount of gain, the transconductance figure being 4,400 micromhos at 250 Ep.

The output of the first i.f. channel feeds into a 6J8G as a second mixer; a number of tubes were tried in this position and this gave the best conversion gain. The X61M, with a conversion transconductance of 750 approx. would possibly be better, but was unavailable for test. The demodulator chosen was a 6G8G, and the output tube the normal 6V6 without feed back or frills.

A noise limiter is almost always essential and for this purpose a 6H6 was used in a fairly effective circuit before the grid of the 6G8G. This employs a circuit described in "W.W.," Dec., '46.

The b.f.o. is necessary of course for c.w. operation and hunting up weak signals. The 6SJ7 used here could be substituted with a 6J7 or equivalent, or almost any tube on hand.

"S" meters are fairly tricky things at the best of times and unless definite calibrations are obtained and held, the readings mean nothing except for a comparative basis and is an aid for tuning. However, it was decided to include one using a 2.5 Ma. movement converted 5 amp. r.f. thermo-couple meter. Plate current variations in the a.v.c. controlled tubes were insufficient except on strong signals to provide a reasonable deflection, so a linear type of arrangement employing a double triode 6SN7 was employed. This provides excellent readings and on strong signals a full scale deflection. The tube could be substituted with a 6A6 or equivalent if a 6SN7 is unavailable, or if a 1 Ma. meter is available it can be placed directly in the h.t. lead to the 6BA6 using a bridge circuit to balance out the standing current with excellent results and the exclusion of the extra valve. I, variations in the 6BA6 were approximately 0.7 Ma. for a solid signal.

Power for the receiver is obtained from a standard type power supply using an 80 or 5Y3GT rectifier and an 80 Ma. power transformer.

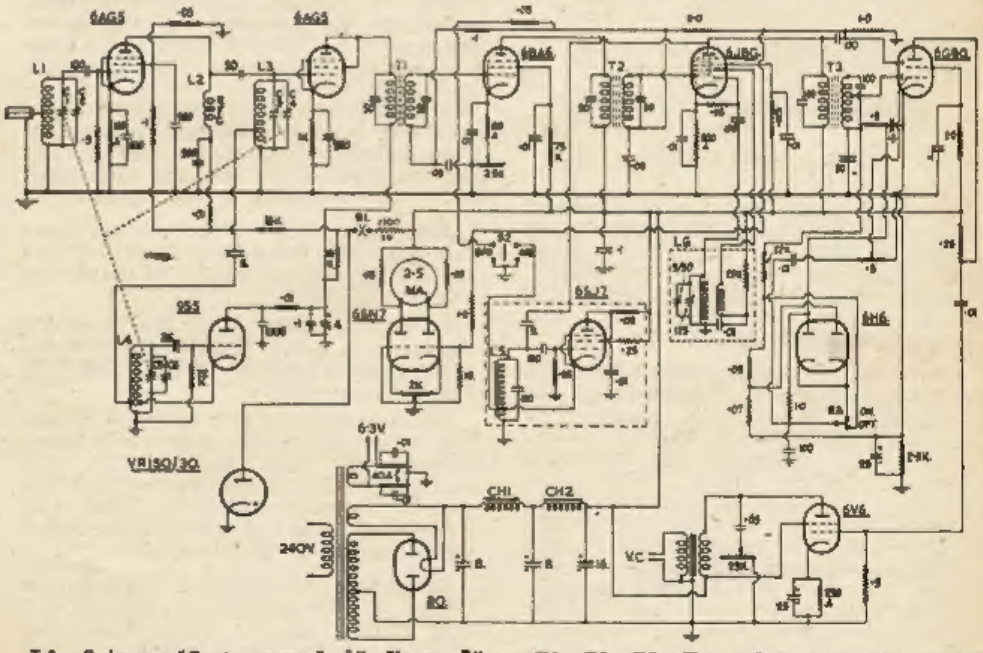
THE R.F. SECTION

On building the r.f. section it was decided to include a blocking condenser and grid leak for the r.f. amplifier to prevent the grid handling excessive current which is not good for the tube. This current can reach alarming values if you are in the habit of leaving the receiver on or even breaking the h.t. supply when transmitting. After "doing" two or three tubes you come round to this way of thinking.

It is essential to fully shield the r.f., mixer and oscillator sections to prevent any unwanted coupling and attain best performance of these high gain valves. While on the subject of shielding, it is well worth while paying a little attention to the shielding of the second mixer oscillator and b.f.o. as well.

Choose a good strong chassis when setting out your equipment for assembly. Nothing is so annoying as the way the signals dive all over the dial when you rest your hand against the dial or panel of the receiver if you use flimsy material. The tuning condensers employed were two-plate isolantite ended types. If there is a choice, use condensers with plates shaped to allow a maximum capacity change per degree of rotation at the extremes of operation, as in the centre position, otherwise, the calibration seems to go astray at the ends. With these condensers the whole of the band can be spread nicely

(Continued on Page 7)



L1—6 turns 18 g. enamel, ¼" diam., ¾" long, tapped 1½ turns from earth end.
L2—R.F. Choke, wound on a 1 Meg. 1 w. resistor, 32 g. enamel.
L3, L4—6 turns 18 g. en. ¼" diam., ¾" long, tapped 1½ turns earth end.
L5—450 Kc. b.f.o. coil, tapped approx. third from earth end.
L6—B.c. coil, reduce grid winding approx. 20%.

C1, C3, C5—Two-plate isolantite ended tuning condensers (midget type), ganged.
C2, C4, C6—5-35 mica (ceramic) trimmer condensers.
T1, T2—2.1 Mc. i.f. transformer (converted).
T3—450 Kc. tapped i.f. transformer.
CH1, CH2—15 H. 80 Ma. filter chokes.
S1, S2, S3—Toggle switches.

* 60B Alma Road, Maroubra, Sydney.

TELEVISION MADE EASY

Part iii.—What's in a Television Signal?

BY JOHN JARMAN,* VK3ADA

So far we've learnt that at the transmitting end, the camera takes photos of the scene continuously, at the rate of 25 per sec., and that each of these photos is split into 625 horizontal lines, each of which is transmitted as a stream of electrical impulses.

We've also learnt that this picture signal is mixed with certain controlling signals, before being transmitted, so that the signal, which reaches our receiver is actually a composite signal, containing both picture and controlling components. We shall now treat this in greater detail.

Now the only controlling signals that we have dealt with so far have been the synchronising signals. In addition to these, however, there are important components called "blanking signals." What are they for? Let us review part of the first article of this series, where we learned that on the receiver screen, a moving spot of light starts at the top left hand corner, and traces out a zig-zag path, completing 625 parallel lines, as shown in Fig. 1.

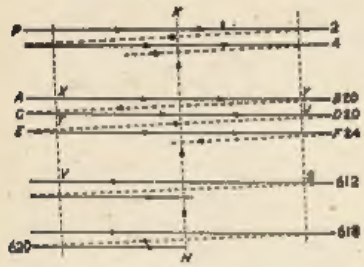


Fig. 1.—Even Field.

Between these lines, the spot returns to the left hand side of the screen, as shown by lines BC, DE, in Fig. 1. These are called the "fly-back" or "retrace" periods, when the spot must not appear in the picture. How can we make this spot invisible between lines?

Well, we've already learnt that the brightness of the spot depends on the amplitude of the received signal. This is illustrated in Fig. 3. Take a look at it. Line AB represents the maximum amplitude of the signal. Now, since we are using negative modulation, the greater the amplitude, the darker will be the spot. Therefore, if the signal's amplitude be increased above a certain level, the spot will become invisible. This is called the "black level" of the transmitted signal, and in Australia, this level is to be 75% of the maximum signal amplitude, as shown by line CD.

Line EF in Fig. 3 shows the minimum signal amplitude, to be permitted in Australia, which is 10% of the full amplitude, and of course represents maximum brightness of the picture.

Therefore, when the amplitude falls to 10% of its maximum value, the moving spot on the receiver screen will be at its brightest; and when the amplitude reaches 75% of its maximum value, spot becomes invisible. Try and figure this out before reading any further.

By increasing the signal amplitude to 75% or over, therefore, we can make the spot invisible whenever we please, and this is the purpose of our blanking signals, which are simply broad pulses, whose amplitude is 75% as shown by XY and PQ in Fig. 3.

Fig. 2.—Odd Field.

Let us now study the movement of this spot more closely. Look at Fig. 1. Commencing at A, spot travels across to B, "painting" a line of the picture. When it reaches B, a synchronising pulse (in the received signal) causes the spot to be "jerked" back to C, from which it commences tracing out another line of the picture, CD, and so the process continues. When dealing with the receiver, later on, we shall learn how these synchronising pulses operate, but for the present, we are only concerned with their positions in the signal.

Now refer back to Fig. 3, where these synchronising pulses are shown. They are simply narrow pulses, of maximum signal amplitude.

Now we notice that the blanking signals are much broader than these synchronising pulses. Why? Look at Fig. 1 again.

Because of the width of these blanking signals, the spot is visible only when between the lines XV and YS. For example, while tracing the line AB, the spot is "blanked out" at Y. Continuing its journey, it is not made visible again till it reaches T. But why?

There are two reasons. Firstly, this "trims up" the edges of the picture, but this is just "by the way." The main function of the broad blanking signal is to separate the picture signal from the synchronising pulse, and thus prevent high amplitude picture impulses from upsetting the synchronisation. This is most important, as we shall learn later.

Remembering that in this article, we are studying the composition of the television signal, let's sum up what is found between the lines of the picture. First of all a blanking signal is applied, just before the light spot on the receiver screen has finished its left-to-right journey. Next, a synchronising pulse, and finally, the blanking signal is removed. These three phases are shown in Fig. 3 by points X, T and Y respectively.

At the end of each picture, the spot is returned to the top of the screen, so that between pictures, as would be expected, there is another synchronising signal consisting of six broad pulses as shown in Fig. 4, and accompanied by a long blanking signal, to act as a "separator," but you ain't 'eard nothin' yet!

In our first article, we touched briefly on "interlaced scanning," explaining that each picture is transmitted in two stages, each consisting of 312½ lines, the first consisting of even numbered lines, and the second, the odd-numbered lines, as shown very briefly in Figs. 1 and 2. Now each of these half-pictures is called a "field," and the pair, forming a complete picture, a "frame". Remember these names, since we'll be using them quite a lot. Once again, let us study the movement of our spot, on the receiver screen, referring back to Fig. 1.

In the case of an "even field," the spot commences at point P, and traces out alternate lines 2, 4, 6, etc., until it is half-way along line 620 (point H). At this instant, the field synchronising pulse (called a "vertical synch. pulse") arrives, causing the spot to be quickly moved to point K, at top of screen. Briefly speaking, it takes a period equal to three lines for the spot to complete the journey from H to K. These will be lines 620, 622, and 624. Since there are only 625 lines in the picture, the next alternate lines after 624 will be number one of the next field.

Spot will therefore, on reaching point K, trace out the latter half of line 1, thus commencing an odd field, as shown in Fig. 2.

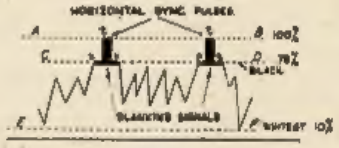


Fig. 3.

Continuing its journey, spot will now trace out lines 3, 5, 7, etc., until it has completed line 619. It will now be at point F in Fig. 2, when another vertical synchronising signal will cause it to be sent back to point G, to commence line 2 of the next even field. Lines 621, 623, and 625 will of course be "lost" during this latter part of the spot's journey, which occupies a 3-line interval.

We see now that interlaced scanning is achieved by using an odd number of lines per picture (625) and an even number of fields per second (50). This ensures that each alternate field will terminate half-way through a horizontal line, and consequently, that the following field will be started half way along a horizontal line, so that the lines of an odd field will fall between those of the

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even fields, which precede and follow it. Study Figs. 1 and 2 carefully if this is not clear.

Our receiver will have no trouble distinguishing an odd field from an even one, since at the end of an odd field (Fig. 4a) the vertical synchronising signal commences at the end of a line, whereas, at the end of an even field, it commences in the middle of a line. (Fig. 4a.)

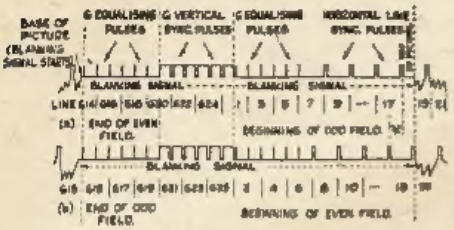

Fig. 4.—Signals Between Fields.

Now let us study the signals that appear in the transmission between fields. During an even field, the blanking signal is applied half way through line 614, and maintained until the middle of line 19 in the next field. This is, of course, to ensure that picture signals will be well separated from the vertical synchronising signal. Likewise, during an odd field, blanking signal is applied at the end of line 613, and retained till the end of line 18 of the next field.

This is shown quite clearly in Fig. 4, but oh my! What are all the other "turly-wurlies" in this diagram for?

Well, it's like this. To keep a steady picture on the screen, the synchronisation of the horizontal deflection oscillator must be maintained throughout the interval between fields (and if you've forgotten what the horizontal deflection oscillator is for, just take a look back at article 1).

The synchronisation of this oscillator makes it necessary for the vertical synchronising signal to be of such a nature that besides "triggering" the vertical deflection oscillator (as we'll learn in more detail later) it must also keep the horizontal oscillator "in step". Vertical synchronising signal therefore consists of six broad pulses, and as we will learn, when dealing with the receiver synchronising circuit (which is a subject in itself), these broad pulses have the same ultimate result as the normal horizontal, or "line" synchronising pulses. The same applies to the equalising pulses, which precede and follow the vertical synchronising pulse. These have the same general shape as the line synchronising pulses, but are much narrower, and although at half-line intervals, keep the horizontal oscillator in step, without changing its frequency. Their function is something else that will be dealt with in a later article, but for the present, it will suffice to say that they are there to help the synchronisation of the vertical oscillator perfect.

So, we have our vertical synchronising signal, and its associated equalising pulses, but what about the horizontal line synchronising pulses that follow? These are to ensure that horizontal oscillator is in step, before the blanking signal is removed.

We've now dealt with the complete composite signal, which is handled by a television receiver. Still clear as mud? Then pour over Fig. 4 a little longer. Study it in conjunction with Figs. 1 and 2.

You will notice that the only lines that appear on the screen are those within the frame XYSV, in Figs. 1 and 2, but adjustments are made to ensure that these lines fill the receiver screen, and the camera target, so that no detail is lost.

To top off this article, let us talk about frequencies. In audio work, the modulating frequencies that we handle range from about 16 cycles/sec. to about 15 Kc.

Now in television, the carrier is modulated by frequencies ranging from 50 cycles/sec. (the field frequency) to over 5 Mc.! I shall not waste valuable magazine space going through the arithmetic of working out this last figure, but a brief outline may help.

For mathematical purposes, each line of picture is assumed to consist of a row of squares. If the picture were square, there would be 625 per line. Picture is to have a height-length ratio (called the "aspect ratio"), however, of three-quarters, so that the number of squares per line will be 625 x 4/3. Each of these squares, called a "picture element" represents the smallest amount of picture detail that can be transmitted, and forms half a cycle of signal current. Now consider the number of lines per field, that carry picture detail, and the number of fields per second.

Without any further calculation, we can see that the answer has a high value, just over 5 Mc.

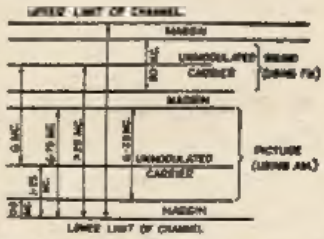

Fig. 5.—Signal Allocation on a Television Channel.

By means of a cunning system, involving the suppression of portion of one of the sidebands, the picture signal (Fig. 5) is "compressed" to fit into a bandwidth of 6.25 Mc., which is the maximum allowed.

The sound is transmitted on an adjacent channel, by a system called "Frequency Modulation" which will be explained in a later article. The total bandwidth allowed for the complete signal is 7.5 Mc.. and the receiver is broadly tuned, to admit the whole lot, through the one input stage, the sound and picture signals being separated within the receiver.

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 22nd Nov., 1951, on the 7 Mc. band. Details of the operating procedure and times of operation will be found on page 5 of the February, 1951, issue of this magazine.

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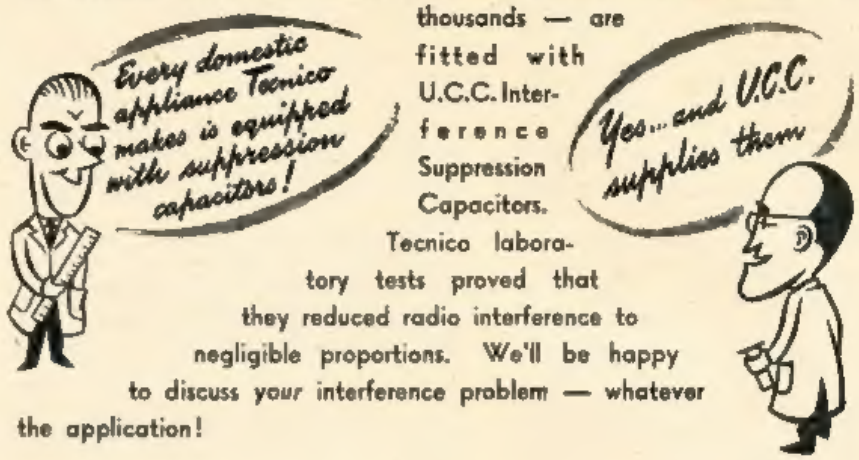

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A DOUBLE CONVERSION SUPERHET FOR 50 Mc.

(Continued from Page 3)

from 95° to 5° on an 0-100° dial if you take care with the coils.

The 2,100 Kc. i.f. transformers can be obtained from standard 1600 or 1500 Kc. transformers. These transformers, if of local manufacture, will be found to employ 100 pF. condensers as a rule, and honeycombe windings. With a little manipulation, remove the 100 pF. condensers and substitute 50 pF. condensers of a silver mica type preferably. Other types may cause the tuning to move, or even a reduction in gain due to loss of Q. When replacing the condensers, recover them with wax to be on the safe side.

SECOND OSCILLATOR

The oscillator section for the second mixer may consist of a suitable b.c. oscillator coil which normally tunes from approximately 1000 Kc. to 2000 Kc. Remove about 20 to 25% of the turns and retune to resonance at 1650 Kc., adding capacity to attain this. This gives a reasonably high C circuit and increases the stability. In the writer's case the capacity employed amounts to almost 175 pF., made up of 125 pF. lumped capacity and a 5-50 pF. good quality trimmer for adjustment. It was not found necessary to frequency control this arrangement with the use of temperature compensating condensers.

To reduce radiation of the fundamental and harmonics to a minimum, the plate voltage to the oscillator was fed via a 300,000 ohm resistor and it oscillated quite readily and supplied enough injection voltage at that reduced h.t. If possible, place all the tuning condensers, and as much of the leads as possible in the coil can and adjust the trimmer through the base or top of the can.

B.F.O. COIL

The b.f.o. coil can consist of a half section of an old 450 Kc. i.f. transformer or any suitable coil fitted into a can and reasonably shielded to prevent stray radiation. Tuning can be accomplished via the slug if employed, otherwise include a small trimmer condenser.

APPLYING THE H.T. SUPPLY

After you have decided on the layout, and mounted and wired the components, comes the moment when you switch on the power, and either switch it off again smartly at the appearance of a wisp of smoke, or proceed to make your electrical checks. A good practice is to connect a voltmeter across the h.t. supply and then switch on, observing the meter reading. This can prevent damage if mistakes in the wiring have been made.

When you have measured the h.t. and decided it is satisfactory, check the voltages on all the tubes and make any adjustments necessary. Before leaving the h.t. on too long, take a quick look at the "S" meter and if the needle is not laying at the bottom of the glass adjust the 2,000 ohm potentiometer for zero reading on the meter.

Switch the noise limiter and the b.f.o. to the "off" position and make any checks necessary on the audio system. A quick flick on the grid of the demodulator will decide whether the audio system is working.

LINING UP THE STAGES

Temporarily short the a.v.c. circuit to ground via the 50,000 ohm resistor and connect a signal generator (if available) to the grid of the 6J8G via a 0.1 uF. condenser and adjust to 450 Kc. You will probably need the full output of the sig. gen. to produce a signal in the speaker for a start, but by adjusting the i.f. transformer, the input can be reduced. After the i.f. transformer is adjusted, switch off the modulation from the sig. gen., switch on the b.f.o., and adjust the frequency by means of the slug to give you the required beat note with the 450 Kc. signal.

With the b.f.o. switched off and the short still on the a.v.c. system, connect the sig. gen. to the grid of the 6BA6 i.f. amplifier. You may be able to hear a weak signal, and if so, roughly peak the 2100 Kc. i.f. transformer, reducing the input accordingly. If you cannot hear a signal, adjust the trimmer on the second mixer oscillator, commencing from the **maximum** setting, until a signal appears. Now tune the i.f. transformer for maximum response.

Remove the sig. gen. and connect to the grid of the 6AG5 mixer, leaving the grid coil in position, and adjust the first i.f. transformer for maximum response. The sensitivity with both i.f. and audio volume controls fully advanced will now be in the vicinity of 50 uv. or so.

Now adjust the i.f. transformers commencing from the second 2100 Kc. transformer for maximum response. Check the setting of the trimmer on the second mixer as this may be slightly off resonance too. The overall sensitivity of the i.f. channel from the grid of the first mixer will now be in the order of 10 to 15 uv. which is a reasonable gain and there should be no evidence of instability. If there is, then look to the by-passing and placement of wiring.

If the sig. gen. will tune to 50 Mc., so much the better; if not, you will have to use a harmonic, second or third will do at a pinch. Remove the short on the a.v.c. line and connect the sig. gen. to the aerial terminal via a small condenser about 100 pF. or via the dummy aerial if available and tune the sig. gen. so that you introduce a 54 Mc. fundamental or harmonic into the receiver. Now adjust the oscillator trimmer condenser for a signal commencing from the maximum position. When you have decided which of the many signals you will hear is the correct one, quickly swing the mixer and r.f. trimmers to resonance and check that they will resonate.

This adjustment should be done with the tuning condenser near minimum position. To make sure you have the right peak on the oscillator, reduce the capacity of the oscillator trimmer until you hear the signal again at approximately the same strength, this is of course the h.f. peak, and retune to the original position that places the oscillator on the l.f. side of the signal, which is what we require.

Tuning the mixer and r.f. sections to resonance is now normal practice and need not be covered here. It is sufficient to say that by peaking the trimmers on the h.f. end of the band and squeezing or opening the coils to track at the l.f. end of the band, the amount of error in tracking, when finally adjusted, is surprisingly small. Better adjustments can be obtained using iron slugs and suitable formers, but these are not always readily obtainable and present difficulties in construction.

You should, at this stage, be able to connect the antenna and get quite an amount of background hiss, if not receive signals. This depends of course on whether there are any signals on the air at the time.

Tune over the band, however, and check for any whistles or strange carriers. If the procedure has been followed using the frequencies suggested there will be no spuriously radiated signals heard from one end to the other. If any whistles are heard, check whether they are being radiated from the second oscillator by placing a screwdriver on the trimmer and noticing if the frequency shifts. If they are, careful manipulation of the second oscillator will move them one way or the other and then re-align the 450 Kc. channel to compensate for the new frequency of the oscillator. However, no signals were apparent for some distance on either side of the band in the model.

If no signal generator is available, it will be worth while making a small oscillator for the 450 Kc. frequency with a switched or plug-in coil unit for the 2100 Kc. signal or using one coil to cover the 450 Kc. channel and the harmonics to cover the 2100 Kc. channel is a possibility.

The frequency of 2100 Kc. ensures that the second spot or image of any signal in the 50-54 Mc. band falls outside the band. 450 Kc. was chosen as the second channel frequency as this affords sufficient selectivity at 50 Mc. unless operating under difficult conditions. 175 Kc. or lower frequencies increase tuning difficulties and necessitate very good mechanical construction and regulation of the h.t. supplies.

Regulation of the h.t. was not found necessary, but was added, using a VR150/30 valve connected across the supply to the oscillator and first mixer.

Noise figures were taken on the receiver using a home-made noise generator. The figures quoted do not necessarily mean that they are accurate, but serve as an indication. The best figure obtained was approximately 4 db, but as pointed out, this is only a reference figure. The main use of the noise generator is to adjust the aerial tap on the grid coil for best signal-to-noise ratio and for this purpose it is ideal.

It is realised that there are shortcomings in certain features of the design of the receiver, but it is a reasonable receiver, behaves well, is stable, and provides the writer with quite a few good contacts on "six."

It is worth mentioning that the best available components should be used for the r.f. end, mica filled valve sockets, good quality air trimmers, isolantite ended tuning condensers, reliable resistors and by-pass condensers, etc.

That's all chaps—be seeing you on "six".

DX NOTES BY VK4QL*

Well, as far as I am concerned up here, September has been the worst DX conditions for many a long time. This is also the opinion of 4EL, from his "super" location. The bands showed promise early in the month, but about the 9th. the bottom fell out of the 7 and 14 Mc. bands, and they never recovered. These two bands in the mornings have produced practically a dead band, even the host of commercials being missing on 7 Mc. 14 Mc. followed no set pattern in the afternoons, signals from one area being there one day and nil the next, but some other continent would turn up. On the 22nd for example, there were plenty of S. and C. Americans until about 0630 G.M.T., then Italian and Asian stations appeared, no North Americans or Europeans being there. Some colossal VK and ZL signals were heard occasionally on 7 Mc. and the next night a dead band practically.

The band survey of stations heard/worked from the gang is not very heartening, stations being listed which normally is chicken feed. All times are shown as G.M.T.

3.5 Mc.: 7RK and my own visits produced very little except weak VK and ZL signals.

7 Mc. Noise level on this band has been quite high since the band collapsed, and with the poor signals, it has not been much good for DX. Even W signals are few and far between. Europeans have been very scarce. 4EL and I had a QSO one night and despite only 20 miles distance, Eric faded out. 7RK/7ZL are hearing a few Europeans in the afternoons, with an occasional N. and C. American at night. They list KL7FAD, XE1SA, G6CJ, GC4LI. 2OW has found the bond of little use, being unable to hear the W.I.A. broadcast. My own listing, VQ4AQ, ZS6KY*, ZS3U*, EA7EB at 0645 and 2100 CN8MZ, SU1FX, HH2LD, LU3EL, VS1DZ*, KJ6AF, KT6AA*, ZC4DW*. KT6AA said he is in Trust territory, pre-war J9, and will let me know the score by letter. I wonder!

14 Mc.: Same complaints from everybody re this band, and its erratic behaviour. You just had to be about at the right time when the DX broke through. An example comes from 3AXN when, on 23rd, he worked a string of South Africans between 0530 and 0630. In the evenings, 7RK/7LZ hear very little except the closer Asians. They list FI8RO*, VU2EJ, VR2CD, KR6CR, MI3RR, YV5AE, AP2K, KG4AT*, KB6AQ, HR1AT, YN1OC*, XE1OM, VQ8CB. 9XK has been doing alright except for the fact that he has not been hearing Europeans for the last couple of months. His worked list includes FY7YC, OQ5RA, HP1BR, TI2PZ, YS1O, 4X4RE, PY1HQ, ZE3JO, VP4LZ, CI4C, FI4T/FF8, FF8JC, FI8RO, AP4A, ZD2DCP, ZD2TBS, ZS3Q, MI3US. Russ has no trouble working the S. Africans in the afternoons. 3CX has been working into Europe OK. VK3 seems able to do this when nil heard here. Alan lists PY6DU, KV4AA, FI8RO, VP9DDD, VP9AAA, VP9AR, ZB1BS*, IIRC Trieste, HB1JJ/HE, MD2JB, MD2PM, YN1OC*, VO6VB, FB8BB, FB8ZZ*, EA9AP, VP4LZ, ST2GL, VQ4RF, ZS5CZ, ZE3JL, the last batch of Africans in the afternoons. 2NS has been having beam trouble, but snagged HC8LA. 4EL has not found the Europeans as plentiful as usual, not hearing one on some days. 2OW has not found things to his liking either, but managed to work CT3AA, GI6TK, SP1JF, ZB2I, HZ1AR, VP4LZ, TI2PZ, FI8RO, KB6AQ, YV5AE. All these bringing him closer to his goal of 100 countries. My own list shows VR4AB*, LA8RB*, VQ8CB*, YN1OC, OQ5LY at 0600, OQ5RA at 0615, OQ5IL at 0645, ZS3K at 0615, LA3B, ZS7C, VP4TR, VP4LZ*, 3A2AD* (QSL via HB9 Bureau, C9NR*, XZ2EM*, FB8ZZ, MI3SL, EA9AP* (Box 213, Melilla), KM6AX*, ZC4OR*, AP2N, MD2PJ (QSL via R.S.G.B.).

9XK, who is ex-3XK, has been doing OK at Samarai to the tune of C3MY*, XZ2EM*, VP4CS*, HS1UN*, CR7BC*, CR7CR*, CR7AU (CR7s round 0900), PJ5HM*, VP5FR*, ZS3K*, VR4AB*, VR1B*, HB1JJ/HE*, HC1FG*, FF8JC*, VQ8CB*, VP6LN*, VP6CDI*, YN1OC*, VU2EJ*, PZ1AL*, OQ5LL*, VR1G*, VP7NM* and YV5EH*. Has worked 50 countries in six weeks.*

28 Mc.: This band has been of little use, but 4EL has found the band worth watching, hearing and working the Americas and Europe at times. 7RK reports the band of no use.

W6KIP said PX1AR was legitimate, but he closed down again before the end of the month. Also that EA6s AB, AC, and AD are fairly active on 14 Mc. I know AB does QSL as DX stations have his card. Alex said also that an SV9 is active on Crete, LB9AC at Svalbard and LB6CH Jan Mayen. Also mentioned VR7AA is reputed to be on Nauru, but little is known about him.

KM6AW/KS6 will be at Pago Pago for two years, but to date does not hear the many VKs that have called him.

The QSL situation shows some good ones which have turned up for the gang, to the tune of FR7AA, FG7XA, XU8F, VP4TB, YI3BZL, VP6SD, KV4AQ, KB6AQ, HS1UN, HC1LM (in seven days), 3A2AB, EA6AM, KC6WC, PK7AQ, now EK1AQ who had one of my cards chase him for four years, but he got it and sent me one in reply. 7RK has been hearing YN1OC promise cards by air mail, yet he and 7LZ are still waiting after two years. 3KX is waiting on cards from KX6 and EK, even though he has worked a few of each. 2YC said cards are still not available from 1PG and 1YG. 2DG worked VR7AA and sent an air mail card to Nauru, the QTH given, and had it returned by the P.M. at Nauru as "unknown." Keith reckons the P.M. will be a bit busy on this returning job as VR7AA is known to be fairly active. KG4AT, through 7LZ, advises there are about 12 KG4 stations active.

3CX also has the news that another FG7XA, a local inhabitant, is active, whilst W6LDD said that LB8CH and FB8BB are active on 14 Mc.

JKX by the way told me he had been hearing things like FP8BX, ZC4OR, ZC4KP, FG7XA, FB8ZZ, HB1JJ/HE, and FY7YB.

Some months ago, I mentioned the propaganda appearing on QSLs from OK. It seems to have gone a stage further now, and it is being thrown at us over the bands. Afraid I got a bit terse with OK1VA. A listener's card from LZ1102 says stations should be operative from LZ after about 7th May. Stations expected to be operating are LZ1AA, LZ1KBA, and LZ1KSR. The present CR4AH is not the same one that was operating a few months ago. When querying the non-receipt of his QSL, he said the previous CR4AH was now in Portugal. Stations signing JB prefix are now on the band, but the contact I had faded out after I heard him mention Japan, so have no further details on this one.

One never knows where the W.I.A. mag. is read these days, and the XYL reckons I'll probably be up for libel from a DX station. This month I received a copy of the "DX'er", the monthly publication of the Northern California DX Club who had read a couple of issues of the mag. Some interesting gen was gleaned from this copy, one item especially, is that if W stations are caught by the F.C.C. working stations in FK, FI, EP, EQ, AR, PJ, HS, J and OE except Allied occupation forces, they are in for a "bluey".

Alan 3CX, is after the C.Z.A.R.A. award which is given for 25 KZ stations worked. Has five to go. 2DG said if Alan works 250 KZ stations, he is due for a "Native Blonde with a bunch of bananas." Even the bananas would have a market these days. Alan also now has his cards for W.A.P. In case some of you have not seen the wording on the KZ award, it's not bad, and reads "To all men who shall see these presents, know ye that the operator of Radio Station ..... being of sound mind and body, did of his volition, without any promise of radio parts, pecuniary compensation, or other forms of coercion, make contact with at least ..... of the KZ5 species, without apparent damage to his antenna, receiving equipment or auditory perception nerves. In recognition of this brilliant and daring achievement, said operator is hereby presented with this certificate, the borders of which depict some of the operating hazards encountered in the Canal Zone." (No sign of the Blonde hazard tho').

QSLs for the month here are: XU8F, CR4AH, VP6CDI, CO2PD, CO7AH, SP1JF, SP1BJ, CR9AF, KV4AA, LA6U 7RK had one from 9S4AX and BERS193 XU8F, PK5AA, KC6WC, KC6WD 9S4AR, CR9AF, ZS7D, VQ8AB, OQ5DZ, and SV1EC (for 1948 report) bringing his total confirmed to 198.

One card I received from C7CW reads: "Found out by the police, non-licensed station, C7CW is out of the air from 3/3/51. I hope see you again when Japanese given with formal licence." So you see all C prefixes are not necessarily China. 3OW is wondering when some of his cards are going to turn up. Patience Gordon is all you need.

My thanks to all those who once again gave me their assistance, which brings me to the thought for the month which is—

"Before you give a phone station his report, put the b.f.o. on, if one graces your Rx. You'll be surprised just what it brings to light at times."

* Flt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

DX C.C. LISTING

PHONE

Call	No.	Ctr.	Call	No.	Ctr.
VK1EE	10	138	VK3AWW	14	113
VK3JD	1	136	VK4FJ	21	109
VK6RU	2	144	VK4WJ	17	104
VK4HR	12	146	VK4DO	20	104
VK6KW	4	145	VK2ADT	13	103
VK3BZ	3	141	VK2AHA	15	102
VK4KS	9	135	VK4WF	16	101
VK3LN	11	133	VK6PJ	19	101
VK6DD	6	126	VK3GG	18	100
VK3JE	7	123	VK3IG	5	100
VK4JP	5	114			

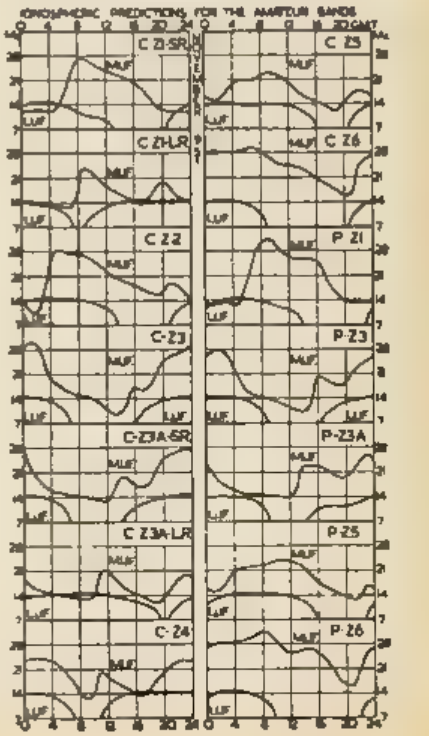
C.W.

Call	No.	Ctr.	Call	No.	Ctr.
VK3BZ	6	138	VK3EK	3	123
VK4EL	9	133	VK6FH	21	119
VK3FH	15	127	VK3JI	25	118
VK2EO	2	159	VK3UM	13	116
VK3CN	1	151	VK3XX	30	114
VK4HR	8	150	VK4DA	7	113
VK6SA	28	150	VK3PL	32	113
VK3VW	4	143	VK7LZ	17	112
VK2QL	5	141	VK4QL	36	110
VK3KB	10	136	VK4RC	13	107
VK6RU	18	135	VK3YD	27	105
VK2GW	16	132	VK3YC	34	103
VK6RX	23	132	VK3HT	37	103
VK3CX	26	132	VK3APA	14	101
VK4FJ	29	129	VK3NC	19	101
VK5BO	23	129	VK3OA	33	101
VK4RF	11	128	VK7RK	22	100
VK4DO	20	126	VK7LJ	24	100
VK3JE	21	124	VK3AEZ	35	100

OPEN

Call	No.	Ctr	Call	No.	Ctr.
VK3BZ	4	202	VK3JA	43	114
VK4HR	7	188	VK2ADT	14	113
VK6RU	8	181	VK3VQ	46	112
VK3JE	13	180	VK3PG	47	111
VK3HG	3	171	VK4RC	21	110
VK3DI	2	170	VK3ZB	34	110
VK3KX	1	167	VK4WF	40	109
VK6KW	13	165	VK2ZC	25	108
VK4EL	10	163	VK2YL	11	106
VK4FJ	32	155	VK3AWN	36	105
VK4DO	15	151	VK3VN	18	104
VK4KS	24	149	VK4UL	27	104
VK5FL	26	143	VK6PJ	44	104
VK3MC	5	139	VK2BZ	17	103
VK3OP	18	137	VK7KB	30	103
VK6DD	22	136	VK2TI	37	103
VK3LN	29	135	VK3HO	38	103
VK3ADE	38	133	VK6DX	42	103
VK2AHA	9	128	VK7RK	31	102
VK2AHM	20	125	VK4TY	35	102
VK2NS	16	123	VK9GW	48	102
VK3HT	41	123	VK2ACX	6	100
VK3JI	33	119	VK3TG	39	100
VK7LZ	23	118	VK3MM	49	111
VK3AWW	45	115			

PREDICTION CHART FOR NOV., 1951



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The September meeting of the V.H.F. Section was devoted to films. Philips Electrical Industries supplied a film dealing with the Electron Microscope which proved extremely interesting. Horrie 2HL brought along a couple of films to add to the evening's entertainment and a short film taken by John 2AMV was shown—the latter dealing with the last Urunga Convention.

The main item covered in general business was the proposal to set aside a small section of the 144 Mc. band for the use of country stations attempting to work into the city. After considerable discussion a vote was taken which resulted in the motion being passed with a very large majority.

The frequency zone—144.0 to 144.1 Mc.—is set aside, by gentlemen's agreement, for the use of country stations wishing to work into the metropolitan area. Stations within the metropolitan area are requested not to use the above mentioned frequency zone, keeping it clear of interference to allow the very much weaker country signals to be heard.

Country stations not having crystals which will multiply into this zone should make use of the crystal swap facilities as mentioned in last month's "Amateur Radio" as quite a number of the city boys have crystals falling within this zone.

One point of importance regarding the zone is that it should be used by stations using crystal control only, as one modulated oscillator would take up the whole zone all on its own!

50 Mc. News. With the warmer weather approaching quite a number of stations have left their winter quarters to try out their gear ready for the DX season. In the hope that someone may be listening from far afield, 2QZ is running regular nightly transmissions on 50.14 Mc. The time is 1630 to 2000 E.A.S.T., the transmissions being on m.c.w.

2AZ has re-appeared on the band after something like two years' silence. Les is now located near Liverpool and still very keen about v.h.f. work. At the moment is using a 40 mx Zepp! The nearer country stations have been coming through well and making contact with city stations. 2ADT, 2VU and 2ADS have been worked in Sydney with signals generally on the increase as the weather becomes warmer and temperature inversions more frequent. So far nothing has been heard of 2GU, Canberra, or stations further afield, but with the increase in activity in country districts, the summer months may see some new contacts made.

144 Mc.! Once again, 144 Mc. has been the centre of v.h.f activity. The contest to decide the winner of the Bardin Trophy for mobile work was held on Sunday, 30th September, and quite a number of stations took the field. 2AMV made the journey from Forbes to the Blue Mountains area to take part in the contest and last heard of was making a pretty big score. John provided the sight of the year with a very substantially made three over three beam mounted on the back of his Holden!

2HL has once again been travelling, taking a party to Mt. Lamble for the holiday week-end. With transmitting equipment for 50, 144 and 560 Mc. and receiving gear from 3.5 Mc. upwards, they had a pretty busy time.

It is pleasing to note the interest in 144 Mc. being taken by country stations and judging by the intense activity there should be large quantities of 144 Mc. r.f. burning up the atmosphere this summer. Out west, the Forbes boys, 2AMV and 2WH, ably assisted by 2BT at Eugowra have been establishing what amounts to a private "telephone" link via 144 Mc. 2JW at Orange has been experimenting with pulsed micropups and a 12 element beam and succeeded in contacting Forbes. 2TA at Young has been in regular contact with 2WH over a distance of 70 miles. This, mark you, with 2TA using a folded dipole about the same height as the guttering on his house and 2WH with an A.S.V. Rx! These results point to the excellent possibilities of v.h.f. work in the country districts where plains are the main feature of the landscape.

A new station on 144 Mc. in the city area is 2OK, ex-JA5AI. John has started the right way with a four stage crystal controlled converter and a crystal controlled Tx and is putting out a very fine signal. 2AJQ is also reported as being active with very low power. In the North Coast districts, 2AHH and 2PA are working 144 Mc. between Port Macquarie and Kempsey and 2XO hopes to have his 144 Mc. gear going this month. 2AEY, Taree, has started up on the band with a mod. osc. using 7193s and was last heard trying to make contact with 2ADT at Cessnock. 2KR has been the only station active on 144 Mc. in the Gosford area and has been running regular skeds with 2ANF during the lunch hour. 2RU has finished his 829 Tx but so far has not made it talk.

576 Mc.: This band was fairly lively last month. Early in the month a number of ASB7 and ASB8 Rx hit the disposals market and were quickly snapped up by the 576 Mc. enthusiasts. These Rx's, suitably modified, make the band appear in an entirely new light, rather reminiscent of the ASV/7AD days on 144 Mc. The only snag about the ASB7 Rx's is the current shortage of lighthouse tubes. However, even without the r.f. stage in operation, the ASB7 performs much better than even the best super regen Rx and of course with the 12 db gain of the r.f. stage represents something really worthwhile.

The near war on polarisation has been amicably settled (we hope!) and by mutual agreement, vertical polarisation is being used, along with a few helical antennae which give circular polarisation. 2HL/portable at Mt. Lamble tried hard to establish two way contact on 576 Mc. but without success. They did however receive very weak signals from 2XX at Sutherland over a long and not particularly good path.

VICTORIAN V.H.F. GROUP

Dates to remember. Nov. 21, Group Meeting at the Rooms, 2000 hours; Nov 11, V.H.F. Field Day No. 2, 1300-1700 hours, 50, 144, 288 and 576 Mc. Lecture or other arrangements for the November meeting will be notified over 3WI broadcasts.

The September meeting was well attended and the 576 Mc. gear created a great amount of interest. Contact with 3QO was established and signals from 2AUX were also received. The Tx used p.p. RL18s; the antenna, eight half-waves all fed and a wire mesh plane reflector, was merely placed on a ledge outside the window; the Rx, a 955 super regen. The Group desires to express its thanks to 2AUX, whose efforts made the demonstration possible, and to extend congratulations to Geoff on the arrival of a junior op.

The matter of field days provided considerable discussion and it was decided to hold six during the coming months. Commencing in October, these are to be held on the Sunday following the first Wednesday of each month, except January, up to April, 1952. It was decided to hold a contest in conjunction with these field days and it was left to the chairman to draw up a set of rules to be presented to the October meeting for approval.

Perfect weather prevailed for the opening of the field day season on 7th October. Portable were 3HK, Mt. Dandenong, 3FO, Arthur's Seat, 3ACH, Mt. Bullengarook, 2AJI, Pretty Sally, 3ATB, Macedon, 3UI, Mt. Major, 3JO, Kinglake. Both 50 and 144 Mc. bands were used, but no information is available about 288 and 576 Mc. activity, if any.

3UI at Mt. Major, midway between Shepparton and Benalla in Northern Victoria, used both 50 and 144 Mc. and was much sought after. He worked 3ABA, 3PG and 3AJI and heard 3UG (150 miles) and 3KF. At Kinglake his signals were R4 S4, but the 955 mod. osc. wasn't equal to the 80 mile hop. The 60 mile hop to Arthur's Seat, however, was made with ease, signals being S8. Several stations using the "community crystal" frequency on 144 Mc. caused QRM while more than enough channels for all remained vacant throughout the band.

SOUTH AUSTRALIA

Main interest is in the V.H.F. Contest, the rules for which are as follows:—

VK5 Intra-State V.H.F. Contest Rules.
50 Mc. And Above

Periods.—Each Sunday evening, 1900-2300 local time commencing Sunday, 6th J[illegible] and ending 31st March.

Transmitting Section Scoring.—One point for each station contacted, plus one point for each twenty miles of the contact. Total of above points to be multiplied by number of individual stations contacted during the Contest periods.

Receiving Section Scoring.—One point for each station logged plus one point for each twenty miles between receiver and transmitting station. To be eligible for an award, a receiving station must forward during the Contest at least one monthly activity report to the V.h.f. Correspondent VK5KL. These reports will be acknowledged by VK5WI on Sunday mornings. Total score will be multiplied by number of activity reports received. Activity reports should contain in the first instance details of receiving equipment and must reach VK5KL by the first of each month.

Transmitting Logs are to show Date, time, station worked, RST/NR. received, RST/NR. sent, points claimed. C.w. stations use a six-figure number, phone stations five-figure number. Numbers to commence at 001.

Receiving Logs to show, Date, time, call sign of station logged, points claimed. All logs must be received by 1st May, 1952. They are to be addressed to Box 1234K, G.P.O., Adelaide, and endorsed V.H.F. Details of awards to be announced later.

Lack of reports from the 288 Mc. gang does not mean lack of activity I understand, but some of the interest has waned since the knowledge that 5LO has been posted from Mallala to Ballarat and so the 288 Mc DX has ceased for the time.

50 Mc. activity has flared up again in Darwin and this time the challenge has been taken up by 5IR operating on 50.8 Mc. and is calling daily at 1730, 1830, 1930 and 2030 C.S.T. for five minutes and then listening. Will this DX season see us break through to Darwin, at least we all hope so.

2DQ Dud Nourse is reported active on 50 and listens each Tuesday and Thursday at 1900 and transmits half hour later. 5QR intends concentrating on 144 and 288 Mc. this summer, looking for duct break throughs to the Eastern States.

— . . . —

NEW PUBLICATION OF INTEREST

Mr. Lay W. Cranch (VK2XC), Managing Editor of "Australian Radio & Electronics," advises that a special section of the journal is now devoted entirely to Amateur Radio, covering constructional articles on Ham gear and equipment, also activity on the bands and notes from around the shacks.

In the August issue of "A.R. & E." is an interesting article on the "Input Impedance of Folded Dipoles" with an impedance step-up chart to take care of calculating the input.

We are also advised that "A.R. & E." are commencing a v.h.f.-u.h.f. programme shortly, which will embrace receivers, transmitters, and the problem of ancillary equipment, such as absorption frequency metres, modulation monitors and other invaluable pieces of test equipment that enable one to work in the v.h.f. bands with so much more sureness, speed, and satisfaction.

Mr. Cranch stated "That the main idea behind the v.h.f. project, is to assist those Hams who feel that with a little help in the way of suitable published articles, they could make a start in this intriguing territory."

"We hope," he said, "that these articles will be of some value to those who have been put off by the difficulties, imagined or real, of v.h.f. gear, as we feel that the Ham can build just as good transmitters and receivers for v.h.f. as he does for the lower frequencies and, what is more important, that the one is no more difficult than the other."

Readers who expect to be taking an interest in the "A.R. & E." v.h.f. programme are invited to send their suggestions for any v.h.f. equipment they would like to see incorporated in these articles. The address to which they should be forwarded is "Aust. Radio & Electronics," 17 Bond Street, Sydney, N.S.W.

50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK3WJ	13	3
VK4RY	1	1
VK2VW	9	3
VK5LC	1	1
VK6DW	3	1
VK4HR	4	1
VK3PG	5	1
VK3RR	6	1
VK3HT	7	1
VK3AEZ	10	1
VK3XA	11	1
VK3GM	12	1
VK3ACL	14	1
VK2ABC	8	

CRYSTAL SWAP

We have received several requests from readers to commence a section listing Crystals available for exchange.

This service will be entirely free and all that is necessary is to forward details of the Crystal to the Editor "A.R." Crystals will be listed ONCE only.

good fone starts at the mike!

CHOOSE YOURS FROM THE NEW ZEPHYR RANGE

Zephyr, Australia's leading engineers specialising in the manufacture of microphones, offer a complete range of precision built units, from the small crystal type to high fidelity velocity microphones for orchestral and studio work.

Robustly built and attractively finished, Zephyr microphones incorporate the latest advances in radio construction, ensuring good frequency response, high output and fidelity.

ZEPHYR "50" SERIES: Australia's highest grade, high-performance velocity microphones. Used in many leading Broadcast Stations, Recording Studios, Parliament House Canberra, U.N.E.S.C.O., etc., etc. An excellent example of first rate workmanship and rugged construction, giving a full frequency range response of 30 to 16,000 c.p.s. Finished in chrome and baked black enamel. The "50" series is ideal for P.A. work, theatres, dance bands and magnetic recordings. Output impedances range from grid to 50 ohms. (Illustrated "D" is 50 R.C.)

ZEPHYR "60" SERIES represents a general purpose range of high grade, low cost dynamic microphones, eminently suitable for Communications, Paging Systems, P.A. Systems, and Home Recording work. Frequency response is from 70 to 7,000 c.p.s. Available with handle and mounting base. (Illustrated "A" is 60 M.D.)

ZEPHYR "XA" CRYSTAL SERIES is made for magnetic wire and tape recordings in addition to general purpose communications work. Low cost and rugged construction make this series the most popular Amateur Microphone on the market today

"4XA" is a hand type mike that may also be screwed into a desk stand or dropped into a receptacle for office desks, etc. (Illustrated at "C" and "E".)

"5XA" is designed for omni directional pickup, and is perfect for conference recordings. (Illustrated at "B".)

Especially Designed for the Amateur . . .

"4XA" is a crystal favourite, "60MD" is a 50 ohm output communications dynamic microphone.

NOTE.—Zephyr velocity microphones in particular are recommended equipment for use with PYROX magnetic systems.

Available from all leading Radio Suppliers in all States.
Manufactured by Cunningham Industries Pty. Ltd.

MAKE FONE CRISP AND CLEAR – IT WILL BE IF IT'S THROUGH ZEPHYR!

C 520

MARKETED BY **R.H.CUNNINGHAM PTY. LTD.**

118 WATTLETREE ROAD, ARMADALE, S.E.3. CABLE "CUNNIG" MELBOURNE—TELEPHONE UY6274

Ross A. Hull Memorial V.H.F. Contest

RULES

1. The Contest will take place in the 50-54 Mc. band and will commence at 0001 hours E.A.S.T. on 15th December, 1951, and will continue until 2359 hours E.A.S.T., 6th January, 1952.

2. Points may be claimed for contacts outside the competitor's own call area.

3. Only one contact with any one station per twenty-four hours commencing midnight E.A.S.T. to count as a scoring contact.

4. Exchange of a serial number will constitute a contact.

5. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may commence with any number between 001 and 100 for the first contact and which may increase in value by one for each successive contact, e.g., if the number chosen for the first contact is 050 then the number for the second contact must be 051, for the third 052, and so on. If any contestant reaches 999, then he will start again 001 and continue.

6. Scores will be calculated on a point's basis, as shown below.

7. Logs should contain the following information: Date, time (E.A.S.T.), call of station contacted, serial number sent, serial number received, points claimed for the contact and at the foot of each page, total points claimed and at the end the grand total.

Logs should be signed by the competitor together with a declaration to the effect that the station was operated strictly in accordance with the Rules and spirit of the Contest and that the decision of the Jubilee Federal Contest Committee shall be final and binding.

Logs must be received by the Jubilee Federal Contest Committee, Box 1734 G.P.O Sydney, not later than the 27th February, 1952.

8. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check Logs from other Countries will be appreciated by the Contest Committee.

9. For the purposes of scoring, Northern Territory will count as a separate Call Area. Also, VK9 will be considered as a State of the Commonwealth.

10. The decision of the Jubilee Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

11. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

12. **Awards.** The outright winner of the Contest **within the Commonwealth of Australia** will hold the Ross A. Hull Memorial Trophy for one year and will, in addition, receive an appropriately inscribed certificate

The highest scorer in each Call Area in Australia and New Zealand will be awarded a certificate. In addition the Jubilee Federal Contest Committee will have the right to make any other additional awards as entries or any other individual performance may warrant.

	VK2	VK3	VK4	VK5	VK6	VK7	N.T.	VK9	ZL1	ZL2	ZL3	ZL4	Other Countries
VK2	–	2	2	2	10	4	6	10	7	7	7	7	20
VK3	2	–	4	2	9	2	6	11	7	7	7	7	20
VK4	2	4	–	5	11	7	3	7	7	8	8	8	20
VK5	2	2	5	–	7	2	3	10	8	8	8	8	20
VK6	10	9	11	7	–	10	12	14	17	17	17	17	20
VK7	4	2	7	2	10	–	7	12	7	7	7	7	20
N.T.	6	6	3	3	12	7	–	3	15	15	15	15	20
VK9	10	11	7	10	14	12	3	–	12	13	14	15	20
ZL1	7	7	7	8	17	7	15	12	–	4	2	3	20
ZL2	7	7	8	8	17	7	15	13	4	–	4	3	20
ZL3	7	7	8	8	17	7	15	14	2	4	–	4	20
ZL4	7	7	8	8	17	7	15	15	3	3	4	–	20
O. Count's	20	20	20	20	20	20	20	20	20	20	20	20	

To obtain points per contact, look down the column of your call area until you come to the line of the State contacted. The figure where the two lines intersect is the point score for that contact. For example, VK5 works VK4, the points are 5

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: G. GLOVER (VK2AG); Federal Secretary: G. M. HULL (VK2ZS); Box 3611W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.

Secretary: David H. Duff (VK2EO), Box 1734 G.P.O., Sydney

Meeting Night. Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor: Don B. Knock, VK2NO, 43 Yanko Avenue, Waverley, Sydney.

Zone Correspondents: North Coast and Tablelands. Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; **Newcastle.** Ron McD. Stuart, VK2ASJ, 98 Dunbar St., Stockton, **Coalfields and Lakes.** Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock, **Western.** W H Stitt, VK2WH, Cambiowa, Forbes, **South Coast and Southern** Roy Raynor VK2DO, 42 Pettit St., Yass, **Eastern Suburbs:** Don Knock, VK2NO, 42 Yanko Ave., Waverley, **Northern Suburbs:** Harry Powell, VK2AYP, Russell Ave., Wahroonga, **St. George.** Chas. Coyle, VK2YK, 34 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. S. C. Semmens, VK3GS.

Assistant Secretary. C. Gibson (VK3FO).

Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.

Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.

Zone Correspondents. Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; **South Western:** N. O'Rorke, VK3AKR, Killigrew, Westmere; **North Eastern:** T. K. Tennant, c/o. Victory Theatre, Tatura; **Far North West.:** M. Folie, VK3GZ, 101 Lemon Ave., Mildura; **Eastern:** H. O. Kellas, VK3AHK, Tinambra; **North Western:** C. Case, VK3ACE, Cummign Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI. Sundays, 1130 hours EST, simultaneously on 3545 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3750 Kc., 7196 Kc., 14343 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7085 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI: Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI. Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

QUEENSLAND

President: J. H. Farrell, VK4WJ.

Secretary: J. F. Pickles, VK4FP, Box 638J, G.P.O., Brisbane.

Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley

Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kuran Street, Chermside, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barbier, VK5MD.

Secretary: G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor: W. W. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK6JW.

Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.

Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.

Meeting Night: Second Monday of each month.

TASMANIA

President: R. O'May, VK7OM.

Secretary: L. W. Edwards, VK7LE, Box 371B, G.P.O., Hobart.

Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor: S. Excell, VK7SJ, 77 Molle St., Hobart, Tasmania.

North Zone Correspondent: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston.

FEDERAL

RUSSIA BANS 60,000 RADIO HAMS (EXCEPT THREE)

The following report comes from an English newspaper and is printed herewith for the interest of Australian Amateurs

"The Russian Government has banned all but three of the Soviet's 60,000 Hams—Amateur Radio Operators—from transmitting to foreign countries And the three who are to be allowed the freedom of the air are highly suspect in Britain

'No reason for the ban has been given, but it is understood that it was imposed after a series of 'illegal' transmissions in code had been picked up by the Russian monitoring stations.

"The three who can still be heard—and in the 20 metre band—are UP5A, of Kaunas, Lithuania; UA3PA, of Moscow, operated by an old hand well known to Hams in this country England); and UM8KAA, a new station in the Centre. Asia Kirghiz Republic.

'Last night the Soviet Embassy in London refused to explain the ban An official said that he doubted whether any Russian Amateurs, other than the three, would be heard calling this country

'For most of the 60,000 Russian Hams the air was their only link with Western civilisation. Most of them observed strictly the rule laid down by international agreement that only technical data should be discussed on the air

"An official of the London bureau which checks Ham contact claims, said yesterday that 30,000 to 40,000 Russian cards confirming contacts with English stations were received each six weeks.

'For twelve months the Russian Government has been operating a station which sends out code messages in the 20 metre band—that most used by the Russian Hams.

'It has also had a 'jammer' idling in that band to block out transmissions from the Soviet Union."

Russian call signs are not included in the Radio Amateur Call Book Magazine and it is doubtful whether there are as many as the above report would have readers believe. Like other countries, Australia receives hundreds and hundreds of Russian cards, a great number of which are only listener's reports and not confirmation of contacts with Australian Amateurs.

G4 TO USE PULSE

Amateurs in the United Kingdom will soon be permitted to use pulse amplitude and pulse width modulation on any fundamental frequency within the bands 2350-2400 Mc., 5700-5800 Mc. and 10,050-10,450 Mc. leaving 50 Mc. guard bands at each end. The power limit is to be 25 watts mean D.C. input and 2.5 kw. peak R.F. power.

Frequency modulation is now permitted on the band 144.5-145.5 Mc.

WORD FROM VK3UM

Hey chaps, we have received a few words from Bill Mitchell, VK3UM (late Federal Secretary), in England! We were just a'wondering whether Bill was ever going to demonstrate to others that he had put to use the Parker fountain pen with which he was presented before leaving his native land to take up military duties in England for an undisclosed (?) period.

He sends his very best 73 to all in VK land and to quote his own words, "tell 'em I miss their darned hides, curse 'em." And if someone doesn't keep Bill's files of "A.R." complete and in an unmutilated condition they can look out for trouble on his return! Hi!

A PARTING THOUGHT

Now is it on? . . . Or is it off? . . .
I can't remember which.
I think it's off! His tombstone says
"He should have used the switch."

(Reprint from Radio ZS—South Africa.)

SILENT KEY

It is with deep regret that we record the passing of:—

VK3DY—Dick Dyer, Sec. Vic. Div. W.I.A., 13th October, 1951.

VK2HI—Perc. Feeny.

VK4KH—Bill Argaet.

W.I.A. ACTIVITIES CALENDAR

Dec. 1-2: Fifth All-European DX Contest, C.W. Section.

Dec. 8-9: Fifth All-European DX Contest, Phone Section.

Dec. 15-Jan. 6: Ross A. Hull Memorial V.H.F. Contest.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The S.S.A. advises that a pirate using the call signs SM4BR and SM3BR is active on the 7 and 14 Mc. bands announcing his QTH as Hallsberg. His real QTH is believed to be in Central Europe. The only licensed Swedish call sign ending in BR is SM5BR.

QSLs for Malaya (VS1 and VS2) should be sent to VS2BA, Mr. E. G. Sugars, Dept. of Telecoms., Muar, Johore, Malaya, until December, 1951. After that date cards should be sent to Mr. C. E. Salton, Postal Services Dept., Malaya. It should be noted that the latter address is as yet incomplete, but the full QTH of Mr. Salton will be advised at a latter date.

A copy of "Amateurs Q Code," by VS2AA has been received from that station. A cursory glance at the "new" Q Code fails to reveal anything which suggests a departure from that at present in use. However, a closer comparison will be made during the month.

Arch Barrie, VK9GB (ex-ZL1OH and ZL1GS) of O.T.C., Rabaul, T.N.G., has at last received sufficient cards to make a start with his backlog of QSLs. Arch, after waiting many months for a supply to arrive from the "south," arranged for an interim supply to be printed at the Vunapope Catholic Mission in Rabaul. These measure up to the recognised commercial standard.

Copies of the rules of the forthcoming Fifth All-European DX Contest, to be staged this year by the R.S.G.B. as part of the Festival Year of Great Britain, set down this event for early December There are two week-ends each 48 hours long, one for c.w. and one for phone. The c.w. section starts at 0001 G.M.T., Saturday, 1st December, and ends at 2400 G.M.T., Sunday, 2nd December. The phone section occupies similar times, Saturday, 8th December, to Sunday, 9th December, 1951.

A copy has been sent to the QSL Manager in each Division. Logs must bear a date stamp prior to 1st January, 1952, to be eligible and should be mailed to R.S.G.B. Contests Committee, 28-30 Little Russell St., London, W.C.1.

[Rules of this Contest are substantially the same as those for last year and printed in the November, 1950, issue.—Ed.]

An up to date list of all licenses issued in Southern Rhodesia, together with addresses, has been compiled by the QSL Manager, J. H. Magee, Box 1088, Bulawayo, Southern Rhodesia, and ZE3JJ.

JANUARY ISSUE

This time every year a plea is made to Advertisers and Contributors to forward copy early for the January issue.

To explain once again—as the printers close down for annual holidays from just before Xmas until the middle of January, it is necessary—if the magazine is to be posted to you on the 1st of January—for the magazine to be printed before Xmas.

Therefore it is requested that material for the January issue must be in the printers' hands by 1st December.

Your co-operation in this matter will be much appreciated.

—Editor.

NEW SOUTH WALES

The monthly general meeting of the N.S.W. Division was held at Science House, Gloucester St., Sydney, on Friday, 28th September, commencing at 7.45 p.m. Main feature of this meeting was a "Back to Methusaleh" discourse headed by Joe Reed, 3JR, supported by Jack Pike 3JP, and Harry Stowe. The appreciative gathering found much of interest in the doings of Old Timers as recounted by the "Methusalehs" on the platform. Total number of years in Amateur Radio on the part of these gentlemen added up to 150. There were some related facts of surprising nature for many. Yarns of the times when Amateurs could and did work two-way with battleships, etc. Early types of valves and components were displayed together with literature and photographs, and many questions were directed to the speakers at the conclusion. It was regretted that owing to unforseen circumstances, 2CM was unable to attend. A vote of thanks was moved by 2GW

Other business followed, including considerable discussion on the question of support for the National Field Day, which event Federal Executive has suggested should be discontinued. Progress was reported by the organisers on arrangements for the Woy Woy Field Day. This time there will be two Tx's in use for the hidden Tx hunt and there will be an all-band scramble for 30 minutes. The winner will be the station with the largest number of contacts. New members were admitted, and it was announced with regret that the death had occurred since the last meeting of Perc Feeny, VK2HI. It was also announced that Old Timer 2WK Rev Kennedy is now unfortunately confined to a hospital bed, and that his equipment is to be offered for disposal. The meeting expressed sympathy with relatives of 2HI and expressed the hope that 2WK would soon be restored to health.

EASTERN SUBURBS

Those 40 metre "EB's" who consider that 20 DX isn't possible without a beam of some kind, should note the results obtained in recent weeks by 2AYE. With a 40 metre east-west Zepp on 20, he worked 28 countries in 14 days—yes, on phone! His first G was G3BTA and 'tis said that Dave had the QSL card on the way almost before the QSO was complete.

An OT who keeps very quiet around these suburbs is Mac 2MY who, it is at least known, has a good Rx in the shack. What about firing up a rig OT? Don't let the old bottles go to waste. Latest a.a.a.c station in this part of Sydney is 2VA, who has been active with a new set up on 20. Vince found that there were a few snags to overcome at first, but seems to have chased off the gremlins nicely.

2AIG has been enjoying his debut on 20 and although he is heard on phone occasionally, most times he is on the key. He has been pleased to have 589 reports from G land.

Jack 2EZ seldom misses the DX when he goes out after it on the key. He tells this scribe that he is using one of those lesser-known antennae (in this country) described as the W3EDP. During the first week he put it up, in 1947 Jack made W.A.C. with it, and moreover much of it is inside the block of flats. The W3EDP as described in the R.S.G.B. Amateur Handbook and is well-worth the attention of those who must erect antennae in a limited space.

2BC heard working DX on 20 c.w., and also on 40 c.w. working VK1BS. An old 6 metre friend has had his last QSO. Syd Schofield, ZL1CU, at Cape Reinga lighthouse on the northerly tip of N.Z's. North Island had worked many VK3s in this area on 6 metre phone during the last four years. It is reported from ZL that ZL1CU passed away recently. It took real enthusiasm to tackle v.h.f. DX from such a lonely spot, but Syd's efforts resulted in many a thrill.

WESTERN SUBURBS

Fred 2ID is on 144 Mc. with A3 after a bad bout of flu. He is hoping for the return of good conditions on 28 Mc., but in the meantime ropes the Ws in on 14 Mc. Keith 2NJ has been conceding three points to the two element beam of Rex 2KH, but still harbours suspicion that Rex has a full gallon or something. Rex 2VG has been having a change from c.w. and has been heard rag-chewing with QRP phone.

Frank 2ANC is heard occasionally on 14 Mc. and John 2AGT is becoming involved in beam construction. Harry 2OQ sometimes natters locally as a change from working the DX two at a time. Bob 2QR is heard again after a period of inactivity. Jack 2BK is still quiet after his antenna fell down with the shock of ten new countries last month. Bob 2OA is mildly active, but is to be seen sketching circuits of 2 metre gear (Acknowledgment to 2OA for the foregoing.)

ST. GEORGE SUBS

Speaking to Reg 2RE the other day, he tells me he will be shortly moving his QTH to his week-ender at Lake Burril, too much QRM in his part of the district. 2AIM is busy making windows, so that is why we have not heard him on the air lately. 2US is also busy putting up a three element wide-spaced beam for 20 mx, let's know how she performs Robbie. Another c.w. fan Arthur 2ACX happily pounding away at the brass on 20 mx. also. Frank 2FT has put up a 50 Mc. bent dipole and he tells me it has been very successful, comparing it with his previous antenna, it increased the signal from practically zero to strength 8. Let's have some DX reports Frank.

One of these days I hope to get enough time to put up my rotary beam. I have been trying to make a start on it for the last twelve months, but something or other crops up; most of the important jobs are done so I may get a chance to get to work on it very shortly. Don't forget boys, if you hear or know of any items of interest for these columns let me know. (Phone LW 4277.) I went around to see John 2XW to see if he had any news for me, but he was out. Listening during the month I have not heard any of the local boys, so let's hope conditions are better next month.

NORTHERN SUBURBS

Dave Duff 2EO, Hon. Secretary of this Division is not on the air often owing to pressure of W.I.A. business. John 2ANF, Roy 2HO, and Bill 2MQ are all v.h.f. men who are heard on 40 also at times, but 2ANF has had the bad luck to burn out his main transformer. Congrats John on winning the V.H.F. Contest. Harry 2AYP recently erected a ground plane for 14 Mc. and has had a large measure of success. The guys act as the G-P and the 33 feet vertical is fed with 75 ohm co-ax. Irwin 2AAJ is pleased about his new BC348N Rx, heard calling DX but his 10 ft. high antenna is not the best.

Bruce 2FD, Asst. Secretary of this Division, has re-built and re-erected his 3-over-3 for 2 mx and it now is rotatable; has had success with 20 watts on 14 Mc. during recent holidays. Ted 2AIE has changed his antenna and thinks it is no improvement. Len 2ADK rarely heard owing to pressure of toil. Bob 2ARL had his 3 element beam struck by lightning and is now using a 3 element job made from brass tube. This zone is sorry to lose Maurie 2AAN from the Lindfield area, he has moved to Eastwood. Bert 2AGW has left for a trip to G-land and will be heard from such stations as G3BUU in the near future.

NORTH COAST AND TABLELANDS

'Tis said insurance agents will no longer accept policies on motor vehicles owned or used by Port Macquarie Amateurs. Peter 2PA did an excellent job on his Vauxhall for the panel beaters and swelled the pockets of the local medico. Not content with that effort, Pete took a trip north in his utility to the VK4 Convention at Somerset Dam; on the way back he ran into a wallaroo (Pete's version), another job for the panel beaters. Not to be outdone, Doug 2SH decided to wreck his big Hudson. Whilst on the subject of motor vehicles, Rod 2ACU and Roy 2DO were last seen in Kempsey sorting water from petrol. Pete 2PA whilst north was working portable and had many good contacts. Ken 2APB has had a change of plans and is not journeying north as mentioned last month, but spends a lot of time with Audrey?

Roy 2NY is busy fishing, heard now and again on 40. Leith 2EA passing out information on double dipoles, having successful contacts with it. A visitor to the Coast was Ron 2UN who spent a few days near Urunga. Ron is becoming an expert on chopping wood, if you want any hints, 2UN is about on 40 at 7 a.m. A newcomer to Ham ranks on the North Coast is Percy Zara, father of the Bellingen Quads. The boys are betting 50 to 1 against a four letter call—nice going Perc. Bill 2AEY has been on the sick list, but is round and about once more and has been testing on 144. 2AWS busy getting a TA12 into operation. Another enthusiast for 144 is Bill 2AWG and Crieff 2XO has polished up miles of copper tube ready for his three over three. If anybody would like to take over a QTH next door to a panel beaters and garage, Alan 2ABO of Kyogle is willing to exchange.

The happiest man on the Coast this moment is Jack 2ADN; Jack recently visited Sydney and was successful at an auction sale in purchasing his eyes dream—a 35 m.m. movie camera of first quality. Harry 2ARY is back to health again and having the time of his life with 2PA's tape recorder. The North Coast is very dry indeed, water-tanks are dry and the grasses just existing. Usually we have more than our fair share—funny world. Last Sunday (23/9) the 2WI broadcast was not heard nor was any other station at more than S3. It is not often this happens, perhaps an 80 mx b.c. of an evening could be considered when conditions are bad.

HUNTER BRANCH

There was an average attendance of members at the annual meeting held at Newcastle on 14th September, with President 2CS in the chair. Acting on a request from Divisional Council that our financial year be brought into line with that of parent body, it was decided to elect officers for six months only. Following a suggestion by retiring Treasurer 2AMM, it was unanimously agreed that it would be an advantage to combine the offices of Secretary and Treasurer. Officers elected unopposed were: President Lionel Swain 2CS, Vice-President Bob Wilson 2AFS, Sec.-Treas. Varley Fitton 2SF. A vote of thanks to the officers of past year was enthusiastically carried.

Prior to general business, the boys were addressed by Major Leachie of the C.M.F. who is forming a Divisional Signals Unit in this district. The Major emphasised the excellent opportunities open to operators and maintainence men in the unit, and "this little yarn" as he described it, was very well received.

Then followed highlight of the evening, a lecture by Alan Stephenson 2PT on "Design and Construction of Transformers as applied to Ham [illegible]." We have in Alan a very competent lecturer and he demonstrated in a comprehensive and lucid manner the tremendous advantages a Ham gains in constructing his own trannies. We are certain to hear more from Alan and no doubt his next lecture will deal specifically with the subject "Scrounging Iron"!

In future the dates and details of Hunter Branch meetings will be published in this column as well as being broadcast by 2WI. Don't forget the Woy Woy Field Day on Sunday, 18th November. This is the "Annual Get-Together" of Metropolitan and Hunter Hams, so roll up and meet the boys from the "Big Smoke."

Holidaying at Tamworth, President 2CS visited Syd 2APS. Nice to see 2LV at the annual meeting. Harold has built a new final and

VALE PERCY FEENY VK2HI

It is with deep regret we record the passing on 28th September after a short illness of Percy Feeny VK2HI of Mascot. Active since 1934, Percy's main interest in the hobby was the building of equipment, and he delighted in producing all the minor gear used around the shack. Always beautifully constructed, not only did he build for his own needs, but would assist those Amateurs in the district who did not have the facilities or ability to manufacture their own gear. Despite his keenness for building, the operating side was not neglected and VK2HI could be heard from 3.5 to 28 Mc.; with main activity centred around 14,000 Kc. on c.w. Percy, at the time of his death, was Assistant QSL Officer for N.S.W. Through the years he assisted in many ways the workings of the W.I.A. Little was heard of these efforts but those that knew him well appreciated the odd jobs he performed in sending out bulletins, building display equipment, sorting cards, etc.

freq. meter, so almost ready to go again. 2CW and 2XY joined the ranks of car owners; Bill not heard much now but Neil still active on 40 (before YL time!) Harry 2AFA had his first post-war phone QSO using cathode modulated TA12—has joined up too. John 2XQ has built a new c.w. monitor and relay system. Another asst. op. has arrived at 2AAI. Hearty congrats Ron and Zenna. 2WP not heard from new QTH yet, Bill shouldn't be long now. Harry 2AFX has converter operating very nicely in front of MN26. An all band exciter has been built into v.f.o. by Ken 2KG. 2AHA fitted Gamma match on beam and new link for 2ASJ but Harold found time to work 93 countries in the Relay! With new xtal insert going well, Keith 2DG is on 20 phone again.

2AMM is sold on vee beams and Bill plans 'em bigger and better. 2TE recently had a field day with FFBs, working 7 in a row; has also built a 2 element 20 beam for Bill 2XT. Despite work on amplifiers, etc., 2PJ finds time for an occasional QSO on 40. Pleased to report Dave 2BZ back on 40/20 and he is using a "diaperpole" antenna! After recent operations 2OS going on leave, and all wish Nev a speedy recovery. Recent visitors at 2ASJ were Percy Sara (awaiting call sign) and XYL, and the old regular Taree Bill 2AEY. Yours truly very grateful to 2AHA and assistant 2IS for their efforts on beam—DX easy now!

Hunter Branch.—The November meeting will be held on Friday 9th at Tech. College, Tighes Hill, Newcastle. Lecture is be arranged. Don't forget, second Friday of each month.

COALFIELDS AND LAKES

Activities in the zone seem to have been affected by conditions. Is there a word in the Ham language with such a universality of meaning? Conditions have been so poor on most bands that there has been little to be active about. If any members have been active, conditions have prevented the news from reaching the local scribe. Max 2KZ lost his antenna in a recent gale—wx conditions! Bob 2KF is concerned at the condition of his 144 Mc. mixer which allows him to hear aircraft on 122 Mc. and little else. 2YL's shack has attained such a cluttered-up condition, that Harry threatened to dismantle the rigs to make room to work. 2ADT has been losing condition on the end of a paint brush. 2VU building a v.f.o., but has not reached a stage where it is in a usable condition. 2ANU could not believe 50 Mc. conditions were so poor that no signals could get through from Sydney, so took a run down to see if there was any activity on that band. 2KR works 2ANF on 144 or 40 as conditions permit. 2GA found the feed line to his 144 beam in a water-logged condition, so expended much energy replacing it. 2AMU seems to be confining his activity to observations of conditions from the astronomer's point of view. 2AIO was heard checking a portable rig for use during his holidays. 2RU has almost completed his 144 Mc. Tx with a view to investigating conditions on that band compared with 50 Mc. Finally congratulations to Geoff 2VU on the arrival of a second daughter—purely local conditions. Let's hope conditions improve next month. (Notes in this issue and for the next few months will be contributed by Jack 2ADT, in view of the above he will probably become known as "Conditions Jack.")

WESTERN ZONE

This month has been notable for the continued v.h.f. activity and the erratic behaviour of the 7 Mc. band. Fade-outs of fast onset and long duration have been numerous during the month, and the presence of commercial stations in the band renders about half the band useless during the "after dark and early morning" period. Rod 2ACU had visit from Roy 2DO during which time 2ACU was put on the air on 144 with three over three. No contacts yet, but Rod is trying hard. Tom 2AMR still the most active Ham in Dubbo. Likewise Lin 2EI, of Parkes. Lin is about to break into "two" with mod.-osc and super-regen outfit following mobile visit from John 2AMV

Trev 2NS been on the sick list for a week or so but back on the job again now. Been trying to open the Bathurst-Sydney link on 2 mx without success to date. John 2AMV been concentrating on mobile 2 mx work. 2WH acting as base station for 2AMV's mobiling, and building high power finals for 50 and 144 Mc.

Norm 2JW startled the boys by stating that his power on 144 was 5 kw.!! Hold it, peak pulse power. Norm has been heard in Forbes by 2WH on m.c.w., and is beaming east each night looking for Sydney contacts. 2AHM at Wentworth heard on 7 Mc. phone. Would like a contact some time OM to get all the low down. A newcomer to the zone is Peter 2JX, now a resident at Wentworth Falls; will soon be on 50. 2HZ's son was persuaded to climb higher up the stringy-bark to give the antenna a few extra feet. 2EX still not active but promises to make the trip to Woy Woy.

SOUTH COAST AND TABLELANDS

Having been on holidays during the last month I have had little except hearsay in the way of news of this zone. Toby 2AKY building new rig to run about 20 watts, v.f.o. will be a Clapp with voltage regulation, plate modulated and band switched for 80, 40 and 20. 2RH is a new station in this zone, Ron was 4EH and runs 12C5 osc. and 1625 p.a., mod. 1625s in AB1. Rx 455B plus additions and subtractions. Pleased to hear Col 2ASF on c.w. from Bega. Monty 2JQ quite often on 40 and worked Len 2AEL during a zone sked. 2RM, 2APP and 2OW are all active on the Sunday morning zone net. 2RM is to re-build shortly. 2PI operating from the kitchen with his KS Mk. II. (kitchen special mark 2, built into a wax match box). 2APP had a visit from Gordon 2OW. Peter spent quite a time showing him around.

Ron 2RS has 50 watts on 6 and 20 watts on 144, nice signal on 40 too. Ross 2PN active again on 6 after a spell of sickness. Cec 2ALS doing fine with QRP using 10B transceiver with about ½ watt input. During my holidays I visited many of the chappies I had often talked to but not met. I am very grateful to Rod 2ACU, Bill 2WF and Crieff 2XO for their hospitality. Rod and myself journeyed from Connamble to the North Coast approx. 1,000 miles meeting 2SH, 2PA, 2AHH, 2PA, 2ARY, Percy Sara and the famous Quads. The highlights: The beautiful 150 ft. bush poles around Dorrigo, second, the extremely well constructed rotary beams from 144 to 20 sported by Bob 2ARG at his scenic spot at Palm Beach, and finally, the equipment of a station un-named, the Rx line-up—3 Super Pro's., one dual diversity Halicrafters, an SX28, and a 680 Eddystone for luck. Rotary beams on 20 and 10. The Tx line-up—a Collins c.w. and phone rig, 25 watts on all bands, plus a Halicrafters BC610 (no wonder I forgot the call sign).

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VICTORIA

CENTRAL WESTERN ZONE CONVENTION AT ARARAT

Roads from all points of the compass converged on Ararat during the latter part of Saturday, 15th September and Sunday morning of 16th September, for the Annual Convention of

the Central Western Zone. The attendance was the second largest to date, 63 registered. It all started of course the day before when 3HG and family arrived at 3HL's, 3AKF and 3RD and XYL camped at 3ARL's, 3ALQ, 3XD, 3ZM and Associate arrived at Ararat from Melbourne; 3PF and XYL from Benella, and of course 3AKR from Westmere. Did they want to go to the pictures in Ararat? Of course not, judging by the funny noises heard on 80 mx, a good time was had by all. 3HL did not work at all from Friday to Monday, only radio, and with Neil's help, checked over the Tx and the new rhombic.

Sunday, 16th Sept. (Convention Day) turned on ideal weather for the show and after assembling at the Ararat Town Hall and being duly labelled, hot luncheon was served at 1300, during which our President 3XU welcomed members and visitors. After lunch, 3XU briefed the Tx hunters at the Town Hall and issued each with a large scale map of the area. During this episode 3YW, 3DP and a.w.l. Geoff sneaked out of town with the Tx to MacDonald Park, about 3 miles n.w. of Ararat on the Dividing Range. By 1440 the Tx was on the air. About 1530 two or three carloads were sighted driving past on the track. The Tx remained hidden until the end at 1630 when envelopes were opened. The nearest group (3ALQ, 3XD, 3ZM and Associate) could be seen searching through the grass and scrub about 40 yards away much to our amusement. So the three miniature tubes are still waiting for a home.

Back at the Town Hall once more 3AKR played a number of recordings he had taken of various local Tx's on his tape machine, some indeed were surprising. 3ARL put on his quiz competition to test the various grades of grey matter on hand. This was finally won by Geoff 3PD. Shortly afterwards 3ACI carried off the prize for the best piece of home-built equipment with a beautifully made shielded loop. 3PD received an indexed note book as his prize, and 3ACI a pair of single blankets.

Tea was served at 1800 hours and we were pleased to welcome 3LF, XYL and family (a previous zone member) dropped in on his way back to Melbourne. After tea we got down to the business of the annual meeting. 3XU was re-elected President, 3TA Vice-President, 3YW Secretary, and 3ATR, 3XC and 3ND were elected to the Committee.

During his report the President stressed the need for members to endeavour to make the monthly zone hook-ups which are held on approx. 7150 Kc. at 1000 hours on the second Sunday of each month, and the desirability of members to try and enrol new W.I.A. members.

It was decided to hold the three miniature tubes as a prize for the next convention and 3PD made a very generous offer of half a dozen tubes for the best D/F loop on show at it. Since the convention, a Taylor T21 has also been offered, so it looks as if the boys have something to shoot for in the next twelve months.

The next convention will be held at Horsham during September, 1952. Further details later.

It will undoubtedly be of interest to Hams and zone members in particular to know that 3TA has permission to play back recordings of Amateur transmissions if requested, Byron cannot offer to do it, you must ask. After the annual meeting, 3TA showed three talkie films covering subjects of general and technical interest. Byron has a beautiful outfit, the excellence of the reproduction was most marked. The convention concluded about 2200 hours with a vote of thanks by 3PD for the pleasant and happy day.

NORTH EASTERN ZONE

Last month has been most devoid of news, haven't even been able to eavesdrop as most of the boys haven't been on. Heard John 3ACK calling CQ but John gave up in disgust. Zone hook-up didn't bring anything to light either. Listened to Eastern Zone to get some information. Looks like Peter 3IZ will be in our zone when he is home and in the Eastern Zone when at work. 3TS about to be married as I hear new QTH about finished. 3GD calling a plaintive CQ just off zone frequency. Get a v.f.o. George and join the boys.

3UI experimenting successfully with a portable v.h.f. rig for 6 and 2 mx which is a partially band-switched job. Feverish activity around the place denotes preparations for the v.h.f. field days, 6 and 2 mx beams and gear are in readiness to journey to Mt. Major. 3AGT winding deflector and focusing coils for a 12 in. c.r.o. Stan is also looking for a spare tube. I have one Stan, doubtless there will be others. 3CI's XYL and harmonie are down with the wog. 3APF sporting a new car. 3YV at time of writing is in the Wangaratta Hospital. Cheers from the boys Howard.

V.h.f. field day was quite a success, judging by the sun and wind burnt faces at its completion. 3UI and partner (Ken), and yours truly were there plus 3KR, XYL and harmonica. Quite a few stations heard by both 3UI and 3CI but it seems that the city boys prefer their own clique and wouldn't look further than their noses. 3KR nearly converted to a v.h.f. man and if you and Jack 3PF can get warm again on the idea I am sure that Ken will be an interested partner. 3ACW still working hard on 80 mx while Andy 3FD is actually enquiring about parts for his modulator. Doug Twigg, of Avenel, has been busy gathering parts for Tx while Mr. Brown, of Yea, has been conspicuous by his silence for the past few months.

SOUTH WESTERN ZONE

Haven't heard anything of the Warrnambool boys this month, certainly hope that the Convention details are well under way. 3HG active this month on both 80 and 20 mx, working plenty of European DX on 20 too; Neil has the 230 a.c. alternator going nicely and has the whole rig a.c. operated now. 3II has been heard occasionally but not overmuch. We will all be looking forward to working you when you get the new Tx going Leigh. 3ADN still manages to come on about once a month. Pat told me the other night, during one of these monthly appearances, that the property is littered with little mines, where he has been continually digging his Land Rover out of.

3AGD very quiet this month, as far as Amateur Radio is concerned at least. I guess when some of the seasoned work is completed we'll hear John consistently on the air again. Nothing heard of 3JA for quite a while. 3AGV still (as ever) has his regular skeds with 2SS. Gordon has also been bitten by the v.h.f. bug and is collecting and building some very nice gear. 3AKR not quite as active as usual, having a multitude of troubles with the rig, right from the v.f.o. to the modulator.

3BW heard quite a lot on 40 since he got his new rig working. 3AKE doing quite well with his portable gear on 144 and 576 Mc., had 14 contacts on 144 the other week-end, was heard in Melbourne S9 on 576 Mc. 3BU using his AT5 again, has got himself a new AR7 Rx. 3AGN hopes to be on the air soon. 3IC gets on occasionally. 3ALG having a few contacts with his antenna 10 ft. off the ground at one end; hasn't got his "sticks" up yet. 3AJT still working plenty of DX on 20 mx. 3AOL has re-vamped his Rx, going pretty good now.

GEELONG AMATEUR RADIO CLUB

Members of the club paid a visit to the F.M. Station at Jolimont and were shown around by Mr. Norman. No member was at all keen to go up the mast. On 30th September the club conducted a hidden Tx hunt. The Tx was hidden by Dick 3ABK and Peter Cartwright. The location was 16 miles from Geelong at Russell's Bridge. Ed 3AKE was doing fine when his Rx broke down. 3SY and 3ALG, only five minutes behind, soon were in the lead and located the hidden Tx. Five cars took part, one party travelled 100 miles for the day. On the way back the Tx was again hidden and was again first found by 3SY and 3ALG, with 3BU 2nd.

On 28th September, the club was visited by the Moorabbin boys. Brian Lloyd 3AOL gave a talk on Transformer Winding, after which a "chin wag" followed over coffee and biscuits. The Geelong gang will pay a visit to the Moorabbin Club in 1952. Peter Perkins was congratulated on attaining his ticket and will be on the air as soon as his call comes through.

EASTERN ZONE

The September meeting of the Sale sub-branch was held at Bairnsdale and was a very good show. Sixteen members were present, which was pretty good, considering that the Sale and Maffra crew travelled 45 miles to be present. Main feature was the film show of various subjects, including one on the subject of radio landing aids, a service film provided by 3ABP. An excellent supper rounded off the evening.

3ANC has been appointed manager of the Traralgon butter factory; any chance of a free issue Norm? 3QZ bemoans the fact that when he goes away for the week-end, some dirty dog pinches one of his chooks. The villain does close the hen house door after him though! 3PR is back on the air from his new house in Leongatha. 3DI in strife with b.c.i. when operating on 80 mx. 3VL/US are active on 50 Mc., no antenna for low frequency as yet. We welcome 3IZ to the zone, Peter is kid-whacking at Yarram and expects to be on 80 soon. My neighbor Leo Dwyer has received his call at last, 3SL. 3SS still building a freq. meter! 3LV is a regular on 3650 Kc. on Sunday evenings. 3BB and 3AEP apparently gone into smoke. 3ALA building up his modulator at last. At least he wandered into 3SS' domain, purchased two resistors and departed, so he must be building Q.E.D.!

3TH's father received a broken shoulder in a car accident in September which prevented Gordon attending the State Convention. Gordon recently announced his engagement to a lucky lady named Charmaine. 3SS, 3QZ and 3PR represented the zone at the State Convention which, for the second time, lapsed for lack of a quorum. This shows a deplorable lack of interest by the city types and here are two suggestions, gratis! First, why not hold the Convention in the country—Eastern Zone for example. We have no trouble getting 20 members to branch meetings in Maffra and we would certainly provide a quorum! Secondly, I suggest having a disposals handout in conjunction with the State Convention! Now, go ahead and sue me!

Martin 3AMV has the Zone Convention arrangements well in hand and as a special treat visitors will be allowed to examine (and admire!) the Eastern Zone's latest acquisition, the "Kinnear Trophy." We expect a good muster as Warragul is close to Melbourne and distance is no excuse for non-attendance!

That's the lot for now, and I hope to see you all at Warragul on 3rd November.

FAR NORTH WESTERN ZONE

Charles 3TI attended the State Convention in Melbourne and returned with pieces of 300 and 75 ohm cable and quite a few ideas about gear generally. From all accounts, although there were very few at the Convention, quite a few points were discussed. A meeting of members of the Zone will be held in the near future to receive Charles' report of happenings. Charlie is still managing to keep on the air and whenever conditions are favourable, contacts 3WI and passes on any news. Noel 3AUG still on 20 mx frantically turning the beam by hand and chasing the elusive DX. I understand that he only requires Europe for W.A.C. The Ouyen gang very quiet, although we are expecting big things from them when the a.c. power is finally connected to the town. Frank 3FC drags the old Type 3 out and dusts it occasionally and is just waiting for the big day when the a.c. is switched on. Understand there is an S9er and Q5er to be attached to Rx.

Fred 3AFC very quiet and gather he has been working on an alternator for his a.c. supply. Harry 2MF unable to find corner in the house to set up his gear. With the approach of summer there is some talk about the v.h.f. bands and from all accounts there is a possibility of some work being done on them this year. Max 3GZ still operating the TA12D with Clamp tube modulation and endeavouring to increase the drive on 20 mx. Jeff 2AHM, of Willow Point, has been missing from the band for a few week-ends. Chas worked him recently and learnt that he had been sick, but now on the road to recovery and hopes to be in Mildura shortly. Had a visit from VK3OO last month and he had long rag chews with some of the gang.

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QUEENSLAND

It is of course well known by all Queenslanders that a get-together at Somerset Dam was held during a week-end in September which was a huge success for an initial meeting. The next one, which is to be held on Foundation Day week-end next year (coinciding with the usual field day contest), should be an enjoyable week-end. Accommodation has been promised for those staying the week-end. It was of interest to note that Hams came from hundreds of miles so you can see that a central meeting point is desirable and Somerset Dam is certainly a lovely setting, although some doubts have been cast on its suitability for radio communication, being hemmed in by surrounding hills. To 4PD goes the major credit for organising the day's outing, and seeing that he is on the newly elected

committee to make arrangements for the next "Do", it should be a huge success.

4RJ (Rev. Delbridge) is back on the air after having returned from a visit to England. Many of you probably worked "Del" when he was first on the air way back in 1927—nice to see you back "Del". We hate to see you having receiver trouble though.

Clare has written to me to apologise for the lack of notes from her this month. You see her Dad (4NC) has also been having Rx trouble. After much scratching of brains, three valves were found to have passed away. Sorry to hear it was such an expensive affair Charlie. I suppose the fact of the matter is that you burnt them out when you were tuning up the beam that time. The filaments must have gone the same way as all those pea-lamps, i.e. forever!

Another man who will be burning up pea-lamps soon is 4TN. (Aussie has only had his ticket for about four weeks.) Yes, he already has a three element rotary beam; personally helped him to push the tower up with the help of about four others, so you can see that there is not much to raising towers—provided you have a tower.

4VJ, 4WJ and 4MD have been inactive—on 20 mx anyhow. I wonder what they are cooking up for the Contest?

We were all very sorry to hear of the death of Bill Argaet (4KH) who would have been known to many of you old-timers.

4KP has a very nice range of gear at home including one of the latest magnetic tape recorders. I have never heard anything so delightful in the way of recorders in my life. I can assure you that if your phone is all distorted when played back to you by Noel, it's an even bet that it is distorted before it gets to the recorder. When Noel has it all wired up to use with his Rx in the shack I know his services will be very much in demand.

Cheerio and thanks for whispering! Sorry no notes from zone correspondents.

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SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division was held at the club rooms in Waymouth Street to a representative gathering of members and visitors, and opportunity was taken to welcome Squadron Leader R. Walker and Flight/Lt. P. Hynds, who had kindly consented to attend the meeting and address members as to how the Radio Amateur could be useful to the R.A.A.F. Both gentlemen made it quite clear that the old idea of the Wireless Reserve had gone by the board in these days of specialised training, and after hearing a brief description of the many aspects of radio as applied to the R.A.A.F., nobody present could but agree with this decision. The suggested alternative of active or general reserve work available to Radio Amateurs was discussed at length and both officers were more than helpful in all respects, and quite a number of members showed a deal of interest in the proposition. Personally I felt that it was the old idea of the Wireless Reserve that appealed to most of those present, and whilst a feeling of disappointment pervaded the meeting that this would not be possible, all present quite realised that under the circumstances this was not at all feasible.

Active participation in the R.A.A.F. Reserve is a question for the individual and the individual alone, and I am sure that it is with regret that the members realised that the old order of Wireless Reserve, with its co-operative and W.I.A. backing, must give way to individual effort and professional service. My co-member of the journalistic profession, Les 5UX, proposed the vote of thanks in his usual polished manner and the enthusiasm with which it was received indicated only too well how successful the evening had been. The films which were screened were very well received, specially the one concerning the American B36, and of course the old favourite, "Frequency Modulation," came in for its usual well merited applause. Altogether it was a very good evening, and although the attendance was slightly down, 75 persons to be exact, I think that the number present surprised quite a few. 5XU was the sound projectionist for the night and turned in a very creditable job. By the look on his face early in the evening, I gathered the impression that he was having difficulty in balancing the budget or something, but it turned out that no ergs could be found in the power point, and after putting on his duck shooting hat and attacking the matter scientifically, the missing ergs were discovered. Good work, "Arold"! The hour being fairly late, the President 5MD gave himself a decided biff on the boko with the gavel and announced that unless there were items of general business needing urgent attention, he would adjourn all business until the next meeting, and that is where it stands for the present.

Among the visitors were Les 5UX, Hughie 5BC, Tom 5TW, Don 5LC and last but not least Charlie 5WQ. Roy 5AC was a very old member to be present (don't often see you these days Roy) and our youngest Associate member, Kevin John Robson (13 years), also was well to the fore.

Associate members' representative, Jim Paris, hit the headlines in the local radio paper recently by being the first Australian listener to hear the Iceland short wave station TFJ. Jim tells me that he could not understand much that was said because the announcer was talking in Icelandic, but he gathered that it was very cold there, because the announcer's teeth were chattering and there were frequent references to brass long-tailed quadrumanous animals. Nice work Jim, and talking of ice, how is the supply of icing sugar?

One of my Ham friends said to me the other day, "that tripe that you write for the magazine isn't bad, but you always seem to write about the same people." I agreed with him and pointed out that the reason for this was because I was only able to write about the people in my immediate circle, and naturally could not write about people or doings that were outside my ken. I suggested that if he and some others were to jot down a few paragraphs and send them to me I would be more than grateful. "Oh, heck," he said, "I am too busy to do that," and then as an afterthought, "why don't you spend a few hours listening in, you would pick up quite a lot of news." He seemed to be somewhat dubious when I suggested that possibly I might be a little busy too. Wouldn't it.

Les 5UX had a transformer made recently for his new Rx, the idea being that he could break down the 240v. to 210v. and all would be lovely. The idea did not work out as well as was expected, much to his mystification, and all and sundry were intrigued as to why. When the receiver was removed from its case for checking, it was noticed that the filaments of the tubes all appeared to be burning at half brightness and to the eternal degradation of "Uncle Xray," another transformer was found in the Rx chassis for the express purpose that the new one was procured. As I have often said, wouldn't it!

5CH is busily engaged in building a xtal controlled 2 mx Tx and as I have not heard any mention of the power house for the last three months' copy, I can only assume that the supply of watts is now well under control. Nearly time you paid us another visit Claude. 5TW has been on holidays and therefore there is nothing to report concerning Tom's radio activities. I went looking for you at the conclusion of the meeting OM, but "Doc" told me that you had gone earlier. 5JA is back from England and very busy getting the mothballs out of his gear. John brought back with him a television Rx which he was using in the old country, although when an image will appear on the screen still remains a debatable point.

5KU has a 40 ft. pole for his beam, but as yet Erg shows no sign of erecting anything on top of the pole. You had better hurry up OM, because before long the gliding weather will be here and then beams will have to take a back seat. 5FD has a recording permit these days and that is keeping John busy, although he has been heard on 40 mx occasionally. 5MS is still working a few on 20 mx, but Stuart is at present mourning the passing of his power tranny belonging to his 2 mx gear. Hats off please gentlemen. 5CJ has been heard sometimes on 40 and 20 mx, and all being well, Colin should meet the city boys at the October meeting as he will be down in the big city on his annual holidays. Hope that I see you this time Col. I understand that 5HL is at the moment of writing confined to hospital, no details to hand as yet, but we all hope that Henry is well on the road to recovery.

It is not often that I can be accused of being over modest, but after reading the closing paragraphs of the VK7 Northern Zone scribe, I feel something like a shrinking violet. The two best broadcasting stations in Australia indeed. Mr. Cullinan! Might I point out to you that over here in VK5 my life is made miserable because I had the temerity to allude to 5DN as being the best broadcasting station in the State. Not content with stealing my thunder, you also double it in spades. Tut, tut.

The news from the Upper Murray boys this month begins on a not-too-happy a note because of the fact that 5KW has fallen a victim to polio and we all hope that it will not be long before Harry's signal will be heard on 40 mx again. It was intended to forward the Type 3 Mark II., belonging to the VK5 Division, up to Harry for his bedside use, but as news reached here this week that he was on the way down to the city for treatment, this matter has been shelved for the present. Incidentally, I was surprised to find out that a number of members did not know that their Division had a Type 3 Mark II. for the use of any member confined to bed through illness. We should get a new publicity officer I think. What am I saying!

5BC has returned from his annual vacation full of the perfect air conditions existing at Normanville compared to the river districts. No noise level to contend with and consequently Hughie's simple portable set-up performed well beyond expectations, but when I have always maintained that he has a two stage amplifier just behind his inner ear.

5MA has been a little restricted in his radio activities this month because of the fact that his XYL has been on the sick list, and Fred has been head nurse, cook, and housemaid. His activities these days are centred on 6 mx and he has wired in a new idea for m.c.w., and if all can be believed, an article on this project may find its way into the magazine very soon. I can give you a tip on how to get it printed Fred, a couple of pounds of butter, or a case of oranges to the Editor will go a long way, that's how I get mine in so regularly. How's your blood pressure Tom?

5CF is going about the place with visions of a super double confusion Rx to beat all Rx's. Murray has been getting along with a simple converter into the b.c. Rx, but the pressure being exerted from the better three-quarters when she wants to listen to the latest "soap opera" has proved too much, and the necessary steps to end this confusion have been taken.

News concerning 5SL can be summed up in two words, "The new baby." Laurie sent me the local news this month, and believe it or not, the news occupied one page and the next twenty pages contained a slight description of the aforesaid baby. Laurie, isn't it wonderful how nature compensates for the imperfections of the parents, ho, ho, ho.

DARWIN AREA

On 1st September, a Jubilee Show was held in Darwin and was a huge success. The show was attended by the greater part of Darwin's 6,000 population. The W.I.A. was represented by a stand which was a credit to the far Northern Zone. A complete station was exhibited, together with a world map and QSL cards showing the extent of amateur communications. An oscilloscope and microphone entertained many children and their parents. An electronic key threw out a challenge to many a good P.M.G. key operator.

Special mention must be given to our friend Max Mander who, with his tape recorder, entertained children and parents alike throughout the day and evening. Special mention also to VKs 5WV, 5CV, 5AS, 5CN, 5AS, 5TF and Terry Robinson, Harry Brown, Charlie See Kee, Keith Halmester and Ces Davis. We hope the latter members will have their call signs soon.

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WESTERN AUSTRALIA

BY L. G. WILSON, VK6LG

What again! Well the simplest way to get rid of me boys is to enlist an official scribe. To save the W.A. Division the trouble of inserting a notice in this magaizne I think I had better state (in case it is not already evident) that I am not a member of the W.I.A., W.A. Div.

What the heck is the good of trying to tell the blokes the conditions prevailing on the bands, I reckon they could quite easily find out for themselves by the application of a few pennyworth of juice to their rigs sometimes.

However, the 7 Mc. band, down this way, still seems to survive the influx of strangers and a

few contacts can usually be had at some time during the evening. Sometimes one State comes in, sometimes another and sometimes the whole darn lot. During the month, have had quite a number of contacts with all States and a few with ZL. Quite often its the same old tale though, "Where are all the other VK6s, the only other one we hear much of is—sorry, can't help it—yes, 6LU.

There have, at odd times, been a few comparative strangers about, even heard 6AG a couple of times and blow me down if 6EC didn't make an appearance on 80 one night. Heard a rumour to the effect that 6JP had been on that band also, something about the rig getting such a shock that all the "toobs" went out. 6BR has a modulator going now and the resultant signal doesn't sound too bad at all—better in fact than some who have been on longer and ought to know better—or something.

6GA certainly didn't take long to get that modulator together at Forrest—pretty good too. More activity in the Geraldton region, but the Dancing Master hasn't been heard of much. 28 Mc. has apparently had a few spasms, 6MO telling me the other day that a W6 bashed his ears for an hour the other Sunday morn. What did they talk of? Yes, you've guessed, compression.

I believe there are still a few music boxes on 7 Mc. One way of overcoming some of 'em is to go the whole hog on controlled carrier as per Mr. Lippert. What about a re-print of that article from "QST" Ed.? I've typed out about a dozen copies of it and scattered them about but so far haven't heard anyone using it. As soon as I do, I will dig out my little QRM buster and have some more fun. To do a proper job of it though, 1,000 volts is really needed on the plates of the 807s.

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TASMANIA

A warm welcome was extended to Alan Finch at the last monthly meeting of the Institute which was held at the usual place. Alan has just completed a 3¼ years' term in the tropics and during that time held the position of broadcast engineer with radio station 9PA. Location of the station was approximately three miles from Port Moresby and from the sound of things Alan is pleased to be home once again. A promise to lecture on his sojourn in the tropics is hoped and we are sure it would be of interest to all, so how about doing the right thing Alan. Another out of town member seen in attendance at our last meeting was 7EJ looking as prosperous as ever.

The lecture for October was ably given by 7AJ who, from every indication, thoroughly understands his new hobby which is tape recording. The mechanical and electrical side leaves nothing to be desired and after a comprehensive talk showing pit falls, etc., which one can get during the construction of same, gave an exhibition of its recording capabilities. A vote of thanks was made to Athol by 7AF on behalf of the members present and the meeting concluded at 10.30 p.m.

Our congratulations must be extended to our old friend 7CA who is a very proud father. According to Max the new second op. overmodulates at times but with the aid of speech clipping, etc., it should overcome this temporary state of affairs. A move back to the studio in Launceston seems likely which should make things a little easier and it is hoped the old familiar call of 7CA will again be heard when this move is made. Talking of moves, it is learnt that 7JB, one of the oldest members of the Institute, is due for an extended period in Japan. Jack unfortunately is in the throes of building a new house which has caused quite a number of headaches and the thought of leaving in the middle of it doesn't help at all. A stay of a few months has been granted which we all hope will help a little.

The views of members of this Division regarding whether the annual national portable field day contest should be kept going was sought at the last meeting and it was the unanimous opinion of all those present it should be continued. It was pointed out by 7FM that this contest gave the opportunity to members of checking portable equipment in the field and would be a national benefit in times of floods, bush fires, etc. Last year there were only three entrants from VK7, but it is hoped a larger participation will be made when held next year.

From 7SD it is learnt that f.m. may be on the way if no interruption in the line of duty occurs. A recent Ham to join the Institute is 7OK, located in the Great Lake area and despite very heavy noise level, manages to work a little DX on 40 which is not too bad considering the location. Was fairly active during the R.D. Contest and so far has not succumbed to phone. A stranger seen at our last meeting was 7CW who, owing to pressure of business, has but little time to spare for Ham activities. 7GR still manages a few contacts despite home building. Influenza kept 7OM off the air, is OK again. 7AF recently returned from a well earned rest in Sydney. Welcome must be made to 7BK who has just joined the Institute. Charlie is an ex-ZD4 and a G call was the first call sign received. Resident now at Seven Mile Beach, we trust we may see you at our future meetings.

NORTHERN TASMANIAN ZONE

Conditions generally have been poor with complete black-outs on most bands at times. However, 7LZ has been putting the poor conditions to use by carrying out some long contemplated re-building and is now looking forward to the return of DX conditions. 7BQ now has his 576 Mc. Rx operating satisfactorily and is anxious for some of our other local Amateurs to get interested in this band. Latest news from 7RB is that the proposed experiments with high level full rating modulation have come to a halt because of a defective mod. transformer.

We all hope to hear 7DB back on 40 before long as Don's new QTH is nearing completion. We also hope to hear from 7GM now that he has moved to a new house. Another with the house moving fever is 7XW who hopes to be in a new QTH before Christmas. There is nothing like "being prepared." At least so thinks Associate Henry Solomon. Henry lives near a river and during recent heavy rain had a boat pulled right up into the doorway of the shack. (The gang are still wondering what Henry would have said if a flood did come along for we understand that he didn't know that the boat did not have a bottom in it.)

7RK is another who has been doing a spot of equipment building, so "look out DX, here comes 7RK." Associate Graeme Nicholls is having lots of fun with his tape recorder—Graeme and Associate Gordon Banner recently made a trip to Melbourne to see what makes the Smoking City tick. 7HY, 7AM and 7LX appear to have gone into hiding as nothing has been seen of them in Amateur circles for some time, only hope the police aren't after them, and talking of police reminds us that 7XW recently had a visit from a gentleman in Blue over the exploits of 7RB and himself as described last month—someone really did take them for suspicious characters.

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AMATEUR CALL SIGNS

FOR MONTH OF AUGUST, 1951

ADDITIONS

VK—

New South Wales

2RH—R. F. Hambridge, "Oakleigh," Hume Highway, Yerrinbool.
2RS—D. C. Haberecht, 482 Dean St., Albury.
2APO—J. K. Carter, 28 Ingram Rd., Wahroonga.
2AZN—I. L. Pogson, "Strathmore," New Line Rd., West Pennant Hills.

Victoria

3DL—R. J. Hollis-Bee, Chevron Hotel, 519 St. Kilda Rd., Melbourne.
3AKD—A. K. Fielden, 11 Rix St., Glen Iris, S.E.6.
3ALU—L. G. Glew, 22 Elphin St., Newport, Mel.
3AMZ—B. G. Powell, 62 Chaucer St., St. Kilda.
3APP—Radio Apprentices School Radio Club, R.A.A.F., "Frognall," via Canterbury.
3AVZ—North Suburban Amateur Group, 93 Jenkin St., Northcote.

South Australia

5FB—J. F. Clewer, Main St., Clare.

Western Australia

6BQ—F. Ward, "Clobessy," Alice Street, Scarborough.
6JC—B. J. Coles, 32 Balfour St., Kalgoorlie.
6NF—N. F. Odgers, O.T.C. Radio Station, Applecross.
6PC—C. A. Pinkus, 7 Baillie St., Victoria Park, Perth.

Territories

9BJ—A. G. Wilkey, Huxley St., Bulolo.
9DB—D. H. D. Beadel, Four Mile, Port Moresby.
9MF—F. M. Nolan, c/o. National Broadcasting Service, Radio 9PA, Port Moresby.

ALTERATIONS

VK—

New South Wales

2LI—8 Gordon Avenue, Coogee, N.S.W.
2MJ—22 Kurrajong Street, Sutherland.
2RC—Palace Street, Denman.
2SR—21 Turf Street, Grafton.
2UB—Lot "A", Westbrook Ave., Wahroonga.
2WE—Lot 21, Kiogle Street, Wahroonga.
2WX—42 West Crescent, Hurstville.
2AAP—15 Forsyth St., South Belmore.
2ADU—112 George St., Hurstville, Sydney.
2AEJ—Narran Street, Baradine.
2AMM—Racecourse Residence, Hamilton.
2ARJ—Fitzroy Street, Coffs Harbour.

Victoria

3AU—274 Mont Albert Road, Surrey Hills.
3BR—Main Street, Pakenham.
3CD—Long Lake, Lake Boga.
3EW—Flat 6, 1 Dunlop Avenue, Ascot Vale.
3GX—32 Ford Street, Ringwood.
3IH—50 Railway Parade, Pascoe Vale.
3JG—36 Fowler Street, Coburg.
3NJ—451 Glenferrie Road, Toorak, S.E.4.
3QC—94 Durrant St., Brighton.
3TY—c/o. Mrs. L. G. Glover, 36 MacArthur Street, Sale.
3AAE—71 Harcourt St., Upper Hawthorn, Melb.
3AGZ—69 Glencairn Avenue, East Brighton.
3AJJ—56 Lower Dandenong Rd., Braeside, via Mordialloc.
3ALG—14 Thomas St., Chilwell, Geelong.
3ALK—16 Jingella Avenue, Jordanville, S.E.11.
3ALP—35 Pettit Crescent, Norlane, Geelong.
3AQC—94 Durrant Street, Brighton.
3AVN—17 Queen Street, East Brunswick.

Queensland

4NG—134 Archer St., Rockhampton (Postal: P.O. Box 250, Rockhampton).
4ZB—Eastleigh Street, Chermside, N.4.
4ZZ—3 Roche Street, Dalley.

South Australia

5AL—c/o. Works and Housing Hostel, Alice Springs (Postal: c/o. Repeater Station, P.O. Alice Springs).
5GN—41 Milner Street, Prospect.
5LZ—1 Lynmouth Avenue, Brighton Park.

Western Australia

6FL—53 Second Avenue, Claremont.
6HM—41a Balfour Street, Kalgoorlie.
6UF—c/o. District Elect. Supervisor, W.A. Government Railways, Geraldton.

Tasmania

7CL—33 Welman Street, Launceston.

Territories

9FM—Dept. Civil Aviation, Madang, T.N.G.

HAMADS

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line. Dealers' advertisements not accepted in this column.

EXCHANGE.—"The Radio Manual," by Sterling, 3rd edition; "Television Really Explained," P. Risdon; "Brown's Signalling," the International Code of Signals; "Modern Radio Communication," vol. II., Reynor. What offers in crystals? H. Cox, 41 Rixon's Pass, Woonona, N.S.W.

FOR SALE.—Modified 1155A Receiver, freq. cov.: B.C., 80, 40, 20 metres cont. cov.; built in S meter, N.L., B.F.O., excellent Ham Receiver, complete with speaker, power supply, £30; less spkr. and power sup., £27. H. Vander Staay, c/o. International Canners Pty. Ltd., Ulverstone, Tasmania.

FOR SALE.—No. 19 Transmitter-Receiver, 2 to 8 Mc., complete or in parts. Includes 12 tubes, genemotor, aerial tuner, phones, micro. Tx xtal controlled, screen mod. W. S. Walker, 17 Carnarvon Pde., West Croydon, S.A.

FOR SALE.—Receiver Bendix RA1B, 150 Kc. to 15 Mc., six bands, band switched and calibrated, r.f. stage, separate osc., elec. band spread, condition as new. Offers? I. Jay, 6 Ballater St., Essendon, Vic. (FX 8000).

FOR SALE.—SCR522 Xmtr. section only, all tubes, 2 xtals, instruction book, 4 over 4 beam, £12. 144 Mc. Converter 2 x CV66, 6AK5 mixer, 6J6 osc., 6J5 c.f. output at 14 Mc., £7/10/-. Bug Key, chrome finish, £3. A. Roudie, Lilydale Rd., Ringwood East, Vic. (WU 7005).

WANTED.—Coils and Xtals for the American SCR536 Handy-Talkie or complete SCR536, also ATR4 Transceiver. G. Laver, Fish Creek, Vic.

WANTED.—R.F. Meter ex Crossley Transceiver. R. Black, George Street, Liverpool, N.S.W.

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11	.116	2.946	27.6	28.1	27.4	27.1	26.7	27.6	30.6	32.6
12	.104	2.642	34.2	35.7	35.1	34.9	34.1	35.2	39.8	40.4
13	.092	2.337	44.8	45.1	47.0	46.7	45.0	50.5	51.2	52.0
14	.080	2.032	58.0	59.5	62.0	61.5	60.5	66.5	67.5	68.5
15	.072	1.829	71.3	73.4	76.2	75.5	74.6	82.0	83.3	84.5
16	.064	1.626	90.1	92.8	96.6	95.4	92.8	104.0	105.2	107.0
17	.056	1.422	115.0	121.0	126.0	125.4	122.2	135.0	137.0	139.0
18	.048	1.219	141.0	145.0	152.0	150.6	149.0	164.0	167.0	170.0
19	.040	1.016	215.0	217.0	246.0	243.0	238.0	264.0	269.0	273.0
20	.036	0.914	288.0	294.0	306.0	304.0	298.0	328.0	332.0	338.0
21	.032	0.813	362.0	371.0	386.0	383.0	403.0	415.0	421.0	427.0
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